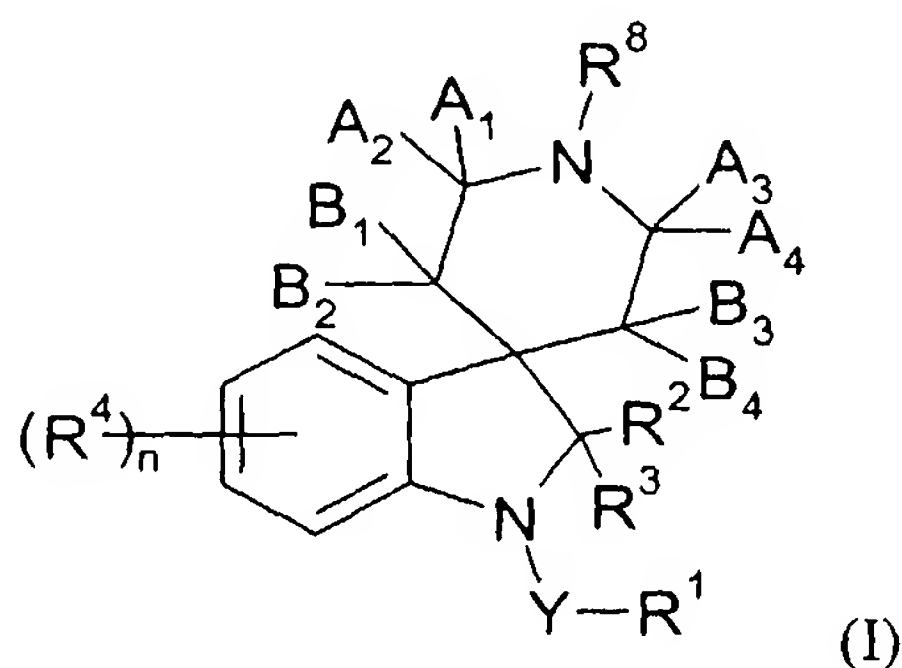


SPIROINDOLINE DERIVATIVES HAVING INSECTICIDAL PROPERTIES

The present invention relates to spiroindoline derivatives, to processes for preparing them, to insecticidal, acaricidal, molluscicidal and nematocidal compositions comprising them and to methods of using them to combat and control insect, acarine, mollusc and nematode pests.

Spiroindoline derivatives with pharmaceutical properties are disclosed in for example WO9825605, WO9429309, WO9828297 and WO9964002. Synthetic routes to selected compounds with pharmaceutical properties are described in Proc. Natl. Acad. Sci. USA (1995), 92, 7001, Tetrahedron (1997), 53, 10983 and Tetrahedron Letters (1997), 38, 1497. It has now surprisingly been found that certain spiroindolines have insecticidal properties.

The present invention therefore provides a compound of formula (I):



wherein Y is a single bond, C=O, C=S or S(O)_m where m is 0, 1 or 2;

R¹ is hydrogen, optionally substituted alkyl, optionally substituted alkoxy, optionally substituted alkylcarbonyl, aminocarbonyl, optionally substituted alkylaminocarbonyl, optionally substituted dialkylaminocarbonyl, optionally substituted aryl, optionally substituted heteroaryl, optionally substituted alkoxy, optionally substituted aryloxy, optionally substituted heteroaryloxy, optionally substituted heterocycloxy, cyano, optionally substituted alkenyl, optionally substituted alkynyl, optionally substituted cycloalkyl, optionally substituted cycloalkenyl, formyl, optionally substituted heterocyclyl, optionally substituted alkylthio, NO or NR¹³R¹⁴ where R¹³ and R¹⁴ are independently hydrogen, COR¹⁵, optionally substituted alkyl, optionally substituted aryl, optionally substituted heteroaryl, optionally substituted heterocyclyl or R¹³ and R¹⁴ together with the N

atom to which they are attached form a group $-N=C(R^{16})-NR^{17}R^{18}$; R^{15} is H, optionally substituted alkyl, optionally substituted alkoxy, optionally substituted aryl, optionally substituted aryloxy optionally substituted heteroaryl, optionally substituted heteroaryloxy or $NR^{19}R^{20}$; R^{16} , R^{17} and R^{18} are each independently H or lower alkyl; R^{19} and R^{20} are
5 independently optionally substituted alkyl, optionally substituted aryl or optionally substituted heteroaryl;

R^2 and R^3 are independently hydrogen, halogen, cyano, optionally substituted alkyl, optionally substituted alkoxy or optionally substituted aryl;

each R^4 is independently halogen, nitro, cyano, optionally substituted C_{1-8} alkyl, optionally substituted C_{2-6} alkenyl, optionally substituted C_{2-6} alkynyl, optionally substituted alkoxycarbonyl, optionally substituted alkylcarbonyl, optionally substituted alkylaminocarbonyl, optionally substituted dialkylaminocarbonyl, optionally substituted C_{3-7} cycloalkyl, optionally substituted aryl, optionally substituted heteroaryl, optionally substituted heterocyclyl, optionally substituted alkoxy, optionally substituted aryloxy, optionally substituted heteroaryloxy, optionally substituted alkylthio or $R^{21}R^{22}N$ where R^{21} and R^{22} are, independently, hydrogen, C_{1-8} alkyl, C_{3-7} cycloalkyl, C_{3-6} alkenyl, C_{3-6} alkynyl, C_{3-7} cycloalkyl(C_{1-4})alkyl, C_{2-6} haloalkyl, C_{1-6} alkoxy(C_{1-6})alkyl, C_{1-6} alkoxycarbonyl or R^{21} and R^{22} together with the N atom to which they are attached form a five, six or seven-membered heterocyclic ring which may contain one or two further heteroatoms selected from
15 O, N or S and which may be optionally substituted by one or two C_{1-6} alkyl groups, or 2 adjacent groups R^4 together with the carbon atoms to which they are attached form a 4, 5, 6, or 7 membered carbocyclic or heterocyclic ring which may be optionally substituted by halogen; n is 0, 1, 2, 3 or 4;

R^8 is optionally substituted alkyl, optionally substituted alkenyl, optionally substituted alkynyl, optionally substituted cycloalkyl, optionally substituted aryl, optionally substituted alkoxy, optionally substituted aryloxy, optionally substituted alkoxycarbonyl, optionally substituted alkylcarbonyl or optionally substituted alkenylcarbonyl;

A_1 , A_2 , A_3 , A_4 , B_1 , B_2 , B_3 and B_4 are independently hydrogen, halogen, hydroxy, cyano, optionally substituted C_{1-8} alkyl, optionally substituted C_{2-6} alkenyl, optionally substituted C_{2-6} alkynyl, optionally substituted alkoxycarbonyl, optionally substituted alkylcarbonyl, optionally substituted alkylaminocarbonyl, optionally substituted dialkylaminocarbonyl, optionally substituted C_{3-7} cycloalkyl, optionally substituted aryl, optionally substituted
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heteroaryl, optionally substituted heterocyclyl, optionally substituted alkoxy, optionally substituted aryloxy, optionally substituted heteroaryloxy, optionally substituted alkylthio, optionally substituted arylthio or $R^{23}R^{24}N$ where R^{23} and R^{24} are, independently, hydrogen, C_{1-8} alkyl, C_{3-7} cycloalkyl, C_{3-6} alkenyl, C_{3-6} alkynyl, C_{3-7} cycloalkyl(C_{1-4})alkyl, C_{2-6} haloalkyl, C_{1-6} alkoxy(C_{1-6})alkyl, C_{1-6} alkoxycarbonyl or R^{23} and R^{24} together with the N atom to which they are attached form a five, six or seven-membered heterocyclic ring which may contain one or two further heteroatoms selected from O, N or S and which may be optionally substituted by one or two C_{1-6} alkyl groups,

or A_1 and A_2 together are =O,

10 or A_3 and A_4 together are =O,

or B_1 and B_2 together are =O,

or B_3 and B_4 together are =O,

or A_1 together with B_1 is a bond,

or A_3 together with B_3 is a bond,

15 or A_1 together with A_2 form with the carbon to which they are bound a three- to seven-membered ring, and may be saturated or unsaturated, and that may contain one or two heteroatoms selected from the group consisting of N, O and S, and which may be optionally substituted by one or two C_{1-6} alkyl groups;

or A_1 together with B_1 form with the carbon to which they are bound a three- to seven-

20 membered ring, and may be saturated or unsaturated, and that may contain one or two heteroatoms selected from the group consisting of N, O and S, and which may be optionally substituted by one or two C_{1-6} alkyl groups;

or B_1 together with B_2 form with the carbon to which they are bound a three- to seven-membered ring, and may be saturated or unsaturated, and that may contain one or two hetero

25 atoms selected from the group consisting of N, O and S, and which may be optionally substituted by one or two C_{1-6} alkyl groups;

or A_1 together with A_3 form a group $-CH_2-$, $-CH=CH-$ or $-CH_2CH_2-$;

or B_1 together with B_3 form a group $-CH_2-$, $-CH=CH-$ or $-CH_2CH_2-$;

or salts or N-oxides thereof provided that when B_1 , B_2 , B_3 and B_4 are all H, either both A_1

30 and A_2 are different from H or both A_3 and A_4 are different from H.

The compounds of formula (I) may exist in different geometric or optical isomers or tautomeric forms. This invention covers all such isomers and tautomers and mixtures thereof in all proportions as well as isotopic forms such as deuterated compounds.

Each alkyl moiety either alone or as part of a larger group (such as alkoxy, alkoxy-
 5 alkoxy, alkylcarbonyl, alkylaminocarbonyl, dialkylaminocarbonyl) is a straight or branched chain and is, for example, methyl, ethyl, n-propyl, n-butyl, n-pentyl, n-hexyl, isopropyl, n-butyl, sec-butyl, iso-butyl, tert-butyl or neo-pentyl. The alkyl groups are suitably C₁ to C₁₂ alkyl groups, but are preferably C₁-C₁₀, more preferably C₁-C₈, even more preferably preferably C₁-C₆ and most preferably C₁-C₄ alkyl groups.

10 When present, the optional substituents on an alkyl moiety (alone or as part of a larger group such as alkoxy, alkoxy, alkylcarbonyl, alkylaminocarbonyl, dialkylaminocarbonyl) include one or more of halogen, nitro, cyano, NCS-, C₃₋₇ cycloalkyl (itself optionally substituted with C₁₋₆ alkyl or halogen), C₅₋₇ cycloalkenyl (itself optionally substituted with C₁₋₆ alkyl or halogen), hydroxy, C₁₋₁₀ alkoxy, C₁₋₁₀ alkoxy(C₁₋₁₀)alkoxy, tri(C₁₋₄)alkylsilyl(C₁₋₆)alkoxy, C₁₋₆ alkoxyalkyl(C₁₋₁₀)alkoxy, C₁₋₁₀ haloalkoxy, aryl(C₁₋₄)-
 15 alkoxy (where the aryl group is optionally substituted), C₃₋₇ cycloalkyloxy (where the cycloalkyl group is optionally substituted with C₁₋₆ alkyl or halogen), C₂₋₁₀ alkenyloxy, C₂₋₁₀ alkynyloxy, SH, C₁₋₁₀ alkylthio, C₁₋₁₀ haloalkylthio, aryl(C₁₋₄)alkylthio (where the aryl group is optionally substituted), C₃₋₇ cycloalkylthio (where the cycloalkyl group is optionally substituted with C₁₋₆ alkyl or halogen), tri(C₁₋₄)alkylsilyl(C₁₋₆)alkylthio, arylthio (where the aryl group is optionally substituted), C₁₋₆ alkylsulfonyl, C₁₋₆ haloalkylsulfonyl, C₁₋₆ alkylsulfinyl, C₁₋₆ haloalkylsulfinyl, arylsulfonyl (where the aryl group may be optionally substituted), tri(C₁₋₄)alkylsilyl, aryl-di(C₁₋₄)alkylsilyl, (C₁₋₄)alkyl-diarylsilyl, triarylsilyl, C₁₋₁₀ alkylcarbonyl, HO₂C, C₁₋₁₀ alkoxyalkyl, aminocarbonyl, C₁₋₆ alkylaminocarbonyl, di(C₁₋₆ alkyl)aminocarbonyl, N-(C₁₋₃ alkyl)-N-(C₁₋₃ alkoxy)aminocarbonyl, C₁₋₆ alkylcarbonyloxy, arylcarbonyloxy (where the aryl group is optionally substituted), di(C₁₋₆)alkylaminocarbonyloxy, oximes such as =NOalkyl, =NOhaloalkyl and =NOaryl (itself optionally substituted), aryl (itself optionally substituted), heteroaryl (itself optionally substituted), heterocyclyl (itself optionally substituted with C₁₋₆ alkyl or halogen), aryloxy (where the aryl group is optionally substituted), heteroaryloxy, (where the heteroaryl group is optionally substituted), heterocyclyloxy (where the heterocyclyl group is optionally substituted with C₁₋₆ alkyl or halogen), amino, C₁₋₆ alkylamino, di(C₁₋₆)alkylamino, C₁₋₆

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alkylcarbonylamino, N-(C₁₋₆)alkylcarbonyl-N-(C₁₋₆)alkylamino, C₂₋₆ alkenylcarbonyl, C₂₋₆ alkynylcarbonyl, C₃₋₆ alkenyloxycarbonyl, C₃₋₆ alkynyloxycarbonyl, aryloxycarbonyl (where the aryl group is optionally substituted) and arylcarbonyl (where the aryl group is optionally substituted).

5 Alkenyl and alkynyl moieties can be in the form of straight or branched chains, and the alkenyl moieties, where appropriate, can be of either the (E)- or (Z)-configuration. Examples are vinyl, allyl and propargyl.

When present, the optional substituents on alkenyl or alkynyl include those optional substituents given above for an alkyl moiety.

10 In the context of this specification acyl is optionally substituted C₁₋₆ alkylcarbonyl (for example acetyl), optionally substituted C₂₋₆ alkenylcarbonyl, optionally substituted C₂₋₆ alkynylcarbonyl, optionally substituted arylcarbonyl (for example benzoyl) or optionally substituted heteroarylcarbonyl.

Halogen is fluorine, chlorine, bromine or iodine.

15 Haloalkyl groups are alkyl groups which are substituted with one or more of the same or different halogen atoms and are, for example, CF₃, CF₂Cl, CF₃CH₂ or CHF₂CH₂.

In the context of the present specification the terms "aryl" and "aromatic ring system" refer to ring systems which may be mono-, bi- or tricyclic. Examples of such rings include phenyl, naphthalenyl, anthracenyl, indenyl or phenanthrenyl. A preferred aryl group is phenyl. In addition, the terms "heteroaryl", "heteroaromatic ring" or "heteroaromatic ring system" refer to an aromatic ring system containing at least one heteroatom and consisting either of a single ring or of two or more fused rings. Preferably, single rings will contain up to three and bicyclic systems up to four heteroatoms which will preferably be chosen from nitrogen, oxygen and sulphur. Examples of such groups include furyl, thienyl, pyrrolyl, pyrazolyl, imidazolyl, 1,2,3-triazolyl, 1,2,4-triazolyl, oxazolyl, isoxazolyl, thiazolyl, isothiazolyl, 1,2,3-oxadiazolyl, 1,2,4-oxadiazolyl, 1,3,4-oxadiazolyl, 1,2,5-oxadiazolyl, 1,2,3-thiadiazolyl, 1,2,4-thiadiazolyl, 1,3,4-thiadiazolyl, 1,2,5-thiadiazolyl, pyridyl, pyrimidinyl, pyridazinyl, pyrazinyl, 1,2,3-triazinyl, 1,2,4-triazinyl, 1,3,5-triazinyl, benzofuryl, benzisofuryl, benzothienyl, benzisothienyl, indolyl, isoindolyl, indazolyl, benzothiazolyl, benzisothiazolyl, benzoxazolyl, benzisoxazolyl, benzimidazolyl, 2,1,3-benzoxadiazole quinolinyl, isoquinolinyl, cinnolinyl, phthalazinyl, quinazolinyl, quinoxalinyl, naphthyridinyl, benzotriazinyl, purinyl, pteridinyl and indolizinyl. Preferred

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examples of heteroaromatic radicals include pyridyl, pyrimidyl, triazinyl, thienyl, furyl, oxazolyl, isoxazolyl, 2,1,3-benzoxadiazole and thiazolyl.

The terms heterocycle and heterocyclyl refer to a non-aromatic ring containing up to 10 atoms including one or more (preferably one or two) heteroatoms selected from O, S and N. Examples of such rings include 1,3-dioxolane, tetrahydrofuran and morpholine.

When present, the optional substituents on heterocyclyl include C₁₋₆ alkyl and C₁₋₆ haloalkyl as well as those optional substituents given above for an alkyl moiety.

Cycloalkyl includes cyclopropyl, cyclopentyl and cyclohexyl.

Cycloalkenyl includes cyclopentenyl and cyclohexenyl.

When present, the optional substituents on cycloalkyl or cycloalkenyl include C₁₋₃ alkyl as well as those optional substituents given above for an alkyl moiety.

Carbocyclic rings include aryl, cycloalkyl and cycloalkenyl groups.

When present, the optional substituents on aryl or heteroaryl are selected independently, from halogen, nitro, cyano, NCS-, C₁₋₆ alkyl, C₁₋₆ haloalkyl, C₁₋₆ alkoxy- (C₁₋₆)alkyl, C₂₋₆ alkenyl, C₂₋₆ haloalkenyl, C₂₋₆ alkynyl, C₃₋₇ cycloalkyl (itself optionally substituted with C₁₋₆ alkyl or halogen), C₅₋₇ cycloalkenyl (itself optionally substituted with C₁₋₆ alkyl or halogen), hydroxy, C₁₋₁₀ alkoxy, C₁₋₁₀ alkoxy(C₁₋₁₀)alkoxy, tri(C₁₋₄)alkylsilyl(C₁₋₆)alkoxy, C₁₋₆ alkoxycarbonyl(C₁₋₁₀)alkoxy, C₁₋₁₀ haloalkoxy, aryl(C₁₋₄)alkoxy (where the aryl group is optionally substituted with halogen or C₁₋₆ alkyl), C₃₋₇ cycloalkyloxy (where the cycloalkyl group is optionally substituted with C₁₋₆ alkyl or halogen), C₂₋₁₀ alkenyloxy, C₂₋₁₀ alkynyloxy, SH, C₁₋₁₀ alkylthio, C₁₋₁₀ haloalkylthio, aryl(C₁₋₄)alkylthio C₃₋₇ cycloalkylthio (where the cycloalkyl group is optionally substituted with C₁₋₆ alkyl or halogen), tri(C₁₋₄)-alkylsilyl(C₁₋₆)alkylthio, arylthio, C₁₋₆ alkylsulfonyl, C₁₋₆ haloalkylsulfonyl, C₁₋₆ alkylsulfinyl, C₁₋₆ haloalkylsulfinyl, arylsulfonyl, tri(C₁₋₄)alkylsilyl, aryl-di(C₁₋₄)-alkylsilyl, (C₁₋₄)alkyl-diarylsilyl, triarylsilyl, C₁₋₁₀ alkylcarbonyl, HO₂C, C₁₋₁₀ alkoxycarbonyl, aminocarbonyl, C₁₋₆ alkylaminocarbonyl, di(C₁₋₆ alkyl)-aminocarbonyl, N-(C₁₋₃ alkyl)-N-(C₁₋₃ alkoxy)aminocarbonyl, C₁₋₆ alkylcarbonyloxy, arylcarbonyloxy, di(C₁₋₆)alkylamino-carbonyloxy, aryl (itself optionally substituted with C₁₋₆ alkyl or halogen), heteroaryl (itself optionally substituted with C₁₋₆ alkyl or halogen), heterocyclyl (itself optionally substituted with C₁₋₆ alkyl or halogen), aryloxy (where the aryl group is optionally substituted with C₁₋₆ alkyl or halogen), heteroaryloxy (where the heteroaryl group is optionally substituted with C₁₋₆ alkyl or halogen), heterocyclyloxy (where the heterocyclyl

group is optionally substituted with C₁₋₆ alkyl or halogen), amino, C₁₋₆ alkylamino, di(C₁₋₆)alkylamino, C₁₋₆ alkylcarbonylamino, N-(C₁₋₆)alkylcarbonyl-N-(C₁₋₆)alkylamino, arylcarbonyl, (where the aryl group is itself optionally substituted with halogen or C₁₋₆ alkyl) or two adjacent positions on an aryl or heteroaryl system may be cyclised to form a 5, 6 or 7 membered carbocyclic or heterocyclic ring, itself optionally substituted with halogen or C₁₋₆ alkyl. Further substituents for aryl or heteroaryl include aryl carbonyl amino (where the aryl group is substituted by C₁₋₆ alkyl or halogen), (C₁₋₆)alkyloxycarbonylamino (C₁₋₆)alkyloxycarbonyl-N-(C₁₋₆)alkylamino, aryloxycarbonylamino (where the aryl group is substituted by C₁₋₆ alkyl or halogen), aryloxycarbonyl-N-(C₁₋₆)alkylamino, (where the aryl group is substituted by C₁₋₆ alkyl or halogen), arylsulphonylamino (where the aryl group is substituted by C₁₋₆ alkyl or halogen), arylsulphonyl-N-(C₁₋₆)alkylamino (where the aryl group is substituted by C₁₋₆ alkyl or halogen), aryl-N-(C₁₋₆)alkylamino (where the aryl group is substituted by C₁₋₆ alkyl or halogen), arylamino (where the aryl group is substituted by C₁₋₆ alkyl or halogen), heteroaryl amino (where the heteroaryl group is substituted by C₁₋₆ alkyl or halogen), heterocyclylamino (where the heterocyclyl group is substituted by C₁₋₆ alkyl or halogen), aminocarbonylamino, C₁₋₆ alkylaminocarbonyl amino, di(C₁₋₆)alkylaminocarbonyl amino, arylaminocarbonyl amino where the aryl group is substituted by C₁₋₆ alkyl or halogen), aryl-N-(C₁₋₆)alkylaminocarbonylamino where the aryl group is substituted by C₁₋₆ alkyl or halogen), C₁₋₆ alkylaminocarbonyl-N-(C₁₋₆)alkyl amino, di(C₁₋₆)alkylaminocarbonyl-N-(C₁₋₆)alkyl amino, arylaminocarbonyl-N-(C₁₋₆)alkyl amino where the aryl group is substituted by C₁₋₆ alkyl or halogen) and aryl-N-(C₁₋₆)alkylaminocarbonyl-N-(C₁₋₆)alkyl amino where the aryl group is substituted by C₁₋₆ alkyl or halogen).

For substituted phenyl moieties, heterocyclyl and heteroaryl groups it is preferred that one or more substituents are independently selected from halogen, C₁₋₆ alkyl, C₁₋₆ haloalkyl, C₁₋₆ alkoxy(C₁₋₆)alkyl, C₁₋₆ alkoxy, C₁₋₆ haloalkoxy, C₁₋₆ alkylthio, C₁₋₆ haloalkylthio, C₁₋₆ alkylsulfinyl, C₁₋₆ haloalkylsulfinyl, C₁₋₆ alkylsulfonyl, C₁₋₆ haloalkylsulfonyl, C₂₋₆ alkenyl, C₂₋₆ haloalkenyl, C₂₋₆ alkynyl, C₃₋₇ cycloalkyl, nitro, cyano, CO₂H, C₁₋₆ alkylcarbonyl, C₁₋₆ alkoxycarbonyl, R²⁵R²⁶N or R²⁷R²⁸NC(O); wherein R²⁵, R²⁶, R²⁷ and R²⁸ are, independently, hydrogen or C₁₋₆ alkyl. Further preferred substituents are aryl and heteroaryl groups.

Haloalkenyl groups are alkenyl groups which are substituted with one or more of the same or different halogen atoms.

It is to be understood that dialkylamino substituents include those where the dialkyl groups together with the N atom to which they are attached form a five, six or seven-membered heterocyclic ring which may contain one or two further heteroatoms selected from O, N or S and which is optionally substituted by one or two independently selected (C₁₋₆)alkyl groups. When heterocyclic rings are formed by joining two groups on an N atom, the resulting rings are suitably pyrrolidine, piperidine, thiomorpholine and morpholine each of which may be substituted by one or two independently selected (C₁₋₆) alkyl groups.

Preferably the optional substituents on an alkyl moiety include one or more of halogen, nitro, cyano, HO₂C, C₁₋₁₀ alkoxy (itself optionally substituted by C₁₋₁₀ alkoxy), aryl(C₁₋₄)alkoxy, C₁₋₁₀ alkylthio, C₁₋₁₀ alkylcarbonyl, C₁₋₁₀ alkoxycarbonyl, C₁₋₆ alkylaminocarbonyl, di(C₁₋₆ alkyl)aminocarbonyl, (C₁₋₆)alkylcarbonyloxy, optionally substituted phenyl, heteroaryl, aryloxy, arylcarbonyloxy, heteroaryloxy, heterocyclyl, heterocyclyloxy, C₃₋₇ cycloalkyl (itself optionally substituted with (C₁₋₆)alkyl or halogen), C₃₋₇ cycloalkyloxy, C₅₋₇ cycloalkenyl, C₁₋₆ alkylsulfonyl, C₁₋₆ alkylsulfinyl, tri(C₁₋₄)alkylsilyl, tri(C₁₋₄)alkylsilyl(C₁₋₆)alkoxy, aryldi(C₁₋₄)alkylsilyl, (C₁₋₄)alkyldiarylsilyl and triarylsilyl.

Preferably the optional substituents on alkenyl or alkynyl include one or more of halogen, aryl and C₃₋₇ cycloalkyl.

A preferred optional substituent for heterocyclyl is C₁₋₆ alkyl.

Preferably the optional substituents for cycloalkyl include halogen, cyano and C₁₋₃ alkyl.

Preferably the optional substituents for cycloalkenyl include C₁₋₃ alkyl, halogen and cyano.

Preferably Y is a single bond, C=O or S(O)_m where m is 0, 1 or 2.

More preferably Y is a single bond, C=O or SO₂.

Yet more preferably Y is a single bond or C=O.

Most preferably Y is C=O.

Preferably R¹ is hydrogen, C₁₋₆ alkyl, C₁₋₆ cyanoalkyl, C₁₋₆ haloalkyl, C₃₋₇ cycloalkyl(C₁₋₄)alkyl, C₁₋₆ alkoxy(C₁₋₆)alkyl, heteroaryl(C₁₋₆)alkyl (wherein the heteroaryl group may be optionally substituted by halo, nitro, cyano, C₁₋₆ alkyl, C₁₋₆ haloalkyl, C₁₋₆ alkoxy, C₁₋₆ haloalkoxy, C₁₋₆ alkylsulfonyl, C₁₋₆ alkylsulfinyl, C₁₋₆ alkylthio, C₁₋₆ alkoxycarbonyl, C₁₋₆ alkylcarbonylamino, arylcarbonyl, or two adjacent positions on the heteroaryl system may be cyclised to form a 5, 6 or 7 membered carbocyclic or heterocyclic

ring, itself optionally substituted with halogen), aryl(C₁₋₆)alkyl (wherein the aryl group may be optionally substituted by halo, nitro, cyano, C₁₋₆ alkyl, C₁₋₆ haloalkyl, C₁₋₆ alkoxy, C₁₋₆ haloalkoxy, C₁₋₆ alkylsulfonyl, C₁₋₆ alkylsulfinyl, C₁₋₆ alkylthio, C₁₋₆ alkoxycarbonyl, C₁₋₆ alkylcarbonylamino, arylcarbonyl, or two adjacent positions on the aryl system may be cyclised to form a 5, 6 or 7 membered carbocyclic or heterocyclic ring, itself optionally substituted with halogen), C₁₋₆ alkylcarbonylamino(C₁₋₆)alkyl, aryl (which may be optionally substituted by halo, nitro, cyano, C₁₋₆ alkyl, C₁₋₆ haloalkyl, C₁₋₆ alkoxy, C₁₋₆ haloalkoxy, C₁₋₆ alkylsulfonyl, C₁₋₆ alkylsulfinyl, C₁₋₆ alkylthio, C₁₋₆ alkoxycarbonyl, C₁₋₆ alkylcarbonylamino, arylcarbonyl, or two adjacent positions on the aryl system may be cyclised to form a 5, 6 or 7 membered carbocyclic or heterocyclic ring, itself optionally substituted with halogen), heteroaryl (which may be optionally substituted by halo, nitro, cyano, C₁₋₆ alkyl, C₁₋₆ haloalkyl, C₁₋₆ alkoxy, C₁₋₆ haloalkoxy, C₁₋₆ alkylsulfonyl, C₁₋₆ alkylsulfinyl, C₁₋₆ alkylthio, C₁₋₆ alkoxycarbonyl, C₁₋₆ alkylcarbonylamino, arylcarbonyl, or two adjacent positions on the heteroaryl system may be cyclised to form a 5, 6 or 7 membered carbocyclic or heterocyclic ring, itself optionally substituted with halogen), C₁₋₆ alkoxy, C₁₋₆ haloalkoxy, phenoxy (wherein the phenyl group is optionally substituted by halogen, C₁₋₄ alkyl, C₁₋₄ alkoxy, C₁₋₄ haloalkyl, C₁₋₄ haloalkoxy, CN, NO₂, aryl, heteroaryl, amino or dialkylamino), heteroaryloxy (optionally substituted by halo, nitro, cyano, C₁₋₆ alkyl, C₁₋₆ haloalkyl, C₁₋₆ alkoxy or C₁₋₆ haloalkoxy), heterocyclyloxy (optionally substituted by halo, C₁₋₆ alkyl, C₁₋₆ haloalkyl, C₁₋₆ alkoxy or C₁₋₆ haloalkoxy), cyano, C₂₋₆ alkenyl, C₂₋₆ alkynyl, C₃₋₆ cycloalkyl, C₅₋₇ cycloalkenyl, heterocyclyl (optionally substituted by halo, nitro, cyano, C₁₋₆ alkyl, C₁₋₆ haloalkyl, C₁₋₆ alkoxy or C₁₋₆ haloalkoxy), C₁₋₆ alkylthio, C₁₋₆ haloalkylthio or NR¹³R¹⁴ where R¹³ and R¹⁴ are independently hydrogen, C₁₋₆ alkyl, C₁₋₆ haloalkyl, C₁₋₆ alkoxy(C₁₋₆)alkyl, phenyl (which may be optionally substituted by halogen, C₁₋₄ alkyl, C₁₋₄ alkoxy, C₁₋₄ haloalkyl, C₁₋₄ haloalkoxy, CN, NO₂, aryl, heteroaryl, amino, dialkylamino or C₁₋₄ alkoxycarbonyl), phenyl (C₁₋₆)alkyl (wherein the phenyl group may be optionally substituted by halogen, C₁₋₄ alkyl, C₁₋₄ alkoxy, C₁₋₄ haloalkyl, C₁₋₄ haloalkoxy, CN, NO₂, aryl, heteroaryl, amino, dialkylamino, C₁₋₆ alkylsulfonyl, C₁₋₆ alkoxycarbonyl, or two adjacent positions on the phenyl ring may be cyclised to form a 5, 6 or 7 membered carbocyclic or heterocyclic ring, itself optionally substituted with halogen), heteroaryl (C₁₋₆)alkyl (wherein the heteroaryl group may be optionally substituted by halo, nitro, cyano, C₁₋₆ alkyl, C₁₋₆ haloalkyl, C₁₋₆ alkoxy, C₁₋₆ haloalkoxy, C₁₋₆ alkylsulfonyl, C₁₋₆ alkylsulfinyl, C₁₋₆ alkylthio,

C₁₋₆ alkoxy carbonyl, C₁₋₆ alkyl carbonylamino, aryl carbonyl, or two adjacent positions on the heteroaryl system may be cyclised to form a 5, 6 or 7 membered carbocyclic or heterocyclic ring, itself optionally substituted with halogen) or heteroaryl (which may be optionally substituted by halo, nitro, cyano, C₁₋₆ alkyl, C₁₋₆ haloalkyl, C₁₋₆ alkoxy or C₁₋₆ haloalkoxy, C₁₋₄ alkoxy carbonyl C₁₋₆ alkyl carbonylamino, phenyloxycarbonylamino (wherein the phenyl group is optionally substituted by halogen, C₁₋₄ alkyl, C₁₋₄ alkoxy, C₁₋₄ haloalkyl, C₁₋₄ haloalkoxy, CN, NO₂, aryl, heteroaryl, amino or dialkylamino), amino, C₁₋₆ alkylamino or phenylamino (wherein the phenyl group is optionally substituted halogen, C₁₋₄ alkyl, C₁₋₄ alkoxy, C₁₋₄ haloalkyl, C₁₋₄ haloalkoxy, CN, NO₂, aryl, heteroaryl, amino or dialkylamino)).

More preferably R¹ is C₁₋₆ alkyl, C₁₋₆ haloalkyl, C₁₋₆ alkoxy(C₁₋₆)alkyl, heteroaryl(C₁₋₃)alkyl (wherein the heteroaryl group may be optionally substituted by halo, nitro, cyano, C₁₋₆ alkyl, C₁₋₆ haloalkyl, C₁₋₆ alkoxy, C₁₋₆ haloalkoxy, C₁₋₆ alkylsulfonyl, C₁₋₆ alkoxy carbonyl, or two adjacent positions on the heteroaryl system may be cyclised to form a 5, 6 or 7 membered carbocyclic or heterocyclic ring, itself optionally substituted with halogen), phenyl(C₁₋₃)alkyl (wherein the phenyl group may be optionally substituted by halogen, C₁₋₄ alkyl, C₁₋₄ alkoxy, C₁₋₄ haloalkyl, C₁₋₄ haloalkoxy, CN, NO₂, aryl, heteroaryl, amino, dialkylamino, C₁₋₆ alkylsulfonyl, C₁₋₆ alkoxy carbonyl, or two adjacent positions on the phenyl ring may be cyclised to form a 5, 6 or 7 membered carbocyclic or heterocyclic ring, itself optionally substituted with halogen), phenyl (which may be optionally substituted by halogen, C₁₋₄ alkyl, C₁₋₄ alkoxy, C₁₋₄ haloalkyl, C₁₋₄ haloalkoxy, CN, NO₂, aryl, heteroaryl, amino, dialkylamino, C₁₋₆ alkylsulfonyl, C₁₋₆ alkoxy carbonyl, or two adjacent positions on the phenyl ring may be cyclised to form a 5, 6 or 7 membered carbocyclic or heterocyclic ring, itself optionally substituted with halogen), heteroaryl (which may be optionally substituted by halo, nitro, cyano, C₁₋₆ alkyl, C₁₋₆ haloalkyl, C₁₋₆ alkoxy, C₁₋₆ haloalkoxy, C₁₋₆ alkylsulfonyl, C₁₋₆ alkoxy carbonyl, or two adjacent positions on the heteroaryl system may be cyclised to form a 5, 6 or 7 membered carbocyclic or heterocyclic ring, itself optionally substituted with halogen), C₁₋₆ alkoxy, C₁₋₆ haloalkoxy, C₂₋₆ alkenyl, heterocyclyl (optionally substituted by halo, cyano, C₁₋₆ alkyl, C₁₋₆ haloalkyl, C₁₋₆ alkoxy or C₁₋₆ haloalkoxy), C₁₋₆ alkylthio, C₁₋₆ haloalkylthio or NR¹³R¹⁴ where R¹³ and R¹⁴ are independently hydrogen, C₁₋₆ alkyl or C₁₋₆ haloalkyl, C₁₋₆ alkoxy(C₁₋₆)alkyl, C₂₋₆ alkyl carbonyl, phenyl carbonyl, (where the phenyl is optionally substituted by halogen, C₁₋₄ alkyl, C₁₋₄ alkoxy, C₁₋₄ haloalkyl, C₁₋₄ haloalkoxy, CN, NO₂, aryl, heteroaryl, amino or dialkylamino), phenyl(C₁₋₃)alkyl (wherein

the phenyl group may be optionally substituted by halogen, C₁₋₄ alkyl, C₁₋₄ alkoxy, C₁₋₄ haloalkyl, C₁₋₄ haloalkoxy, CN, NO₂, aryl, heteroaryl, amino, dialkylamino, C₁₋₆ alkylsulfonyl, C₁₋₆ alkoxycarbonyl, or two adjacent positions on the phenyl ring may be cyclised to form a 5, 6 or 7 membered carbocyclic or heterocyclic ring, itself optionally substituted with halogen) or heteroaryl(C₁₋₃)alkyl (wherein the heteroaryl group may be optionally substituted by halo, nitro, cyano, C₁₋₆ alkyl, C₁₋₆ haloalkyl, C₁₋₆ alkoxy, C₁₋₆ haloalkoxy, C₁₋₆ alkylsulfonyl, C₁₋₆ alkylsulfinyl, C₁₋₆ alkylthio, C₁₋₆ alkoxycarbonyl, C₁₋₆ alkylcarbonylamino, arylcarbonyl, or two adjacent positions on the heteroaryl system may be cyclised to form a 5, 6 or 7 membered carbocyclic or heterocyclic ring, itself optionally substituted with halogen).

Even more preferably R¹ is C₁₋₆ alkyl, C₁₋₆ haloalkyl, heteroaryl(C₁₋₃)alkyl (wherein the heteroaryl group may be optionally substituted by halo, cyano, C₁₋₆ alkyl, C₁₋₆ haloalkyl and where the heteroaryl group is a thiazole, pyridine, pyrimidine, pyrazine or pyridazine ring), heteroaryl (optionally substituted by halo, cyano, C₁₋₆ alkyl, C₁₋₆ haloalkyl and where the heteroaryl group is a pyridine, pyrimidine, 2,1,3-benzoxadiazole, pyrazine or pyridazine ring), C₁₋₆ alkoxy, C₁₋₆ alkoxy(C₁₋₆)alkyl, C₁₋₆ alkylamino, C₁₋₆ alkoxy(C₁₋₆)alkylamino or heteroaryl(C₁₋₃)alkylamino (wherein the heteroaryl group may be optionally substituted by halo, cyano, C₁₋₆ alkyl, C₁₋₆ haloalkyl and where the heteroaryl group is a thiazole, pyridine, pyrimidine, pyrazine or pyridazine ring).

Most preferably R¹ is pyridyl (optionally substituted by halo, C₁₋₃ alkyl or C₁₋₃ haloalkyl) especially halo-substituted pyridyl.

It is preferred that R² and R³ are independently hydrogen, C₁₋₆ alkyl, C₁₋₆ haloalkyl, C₁₋₆ alkoxy or cyano.

More preferably R² and R³ are independently hydrogen, halogen, C₁₋₂ alkyl, C₁₋₂ haloalkyl, C₁₋₂ alkoxy, cyano.

Even more preferably R² and R³ are independently hydrogen or C₁₋₄ alkyl.

Yet more preferably R² and R³ are independently hydrogen or methyl.

Most preferably R² and R³ are both hydrogen.

Preferably each R⁴ is independently halogen, cyano, C₁₋₈ alkyl, C₁₋₈ haloalkyl, C₁₋₆ cyanoalkyl, C₁₋₆ alkoxy(C₁₋₆)alkyl, C₃₋₇ cycloalkyl(C₁₋₆)alkyl, C₅₋₆ cycloalkenyl(C₁₋₆)alkyl, C₃₋₆ alkenyloxy(C₁₋₆)alkyl, C₃₋₆ alkynyloxy(C₁₋₆)alkyl, aryloxy(C₁₋₆)alkyl, C₁₋₆ carboxyalkyl, C₁₋₆ alkylcarbonyl(C₁₋₆)alkyl, C₂₋₆ alkenylcarbonyl(C₁₋₆)alkyl, C₂₋₆ alkynylcarbonyl(C₁₋₆)-

alkyl, C₁₋₆ alkoxy carbonyl(C₁₋₆)alkyl, C₃₋₆ alkenyloxy carbonyl(C₁₋₆)alkyl, C₃₋₆
 alkynyloxy carbonyl(C₁₋₆)alkyl, aryloxy carbonyl(C₁₋₆)alkyl, C₁₋₆ alkylthio(C₁₋₆)alkyl, C₁₋₆
 alkylsulfinyl(C₁₋₆)alkyl, C₁₋₆ alkylsulfonyl(C₁₋₆)alkyl, aminocarbonyl(C₁₋₆)alkyl, C₁₋₆
 alkylaminocarbonyl(C₁₋₆)alkyl, di(C₁₋₆)alkylaminocarbonyl(C₁₋₆)alkyl, phenyl(C₁₋₄)alkyl
 5 (wherein the phenyl group is optionally substituted by halogen, C₁₋₄ alkyl, C₁₋₄ alkoxy, C₁₋₄
 haloalkyl, C₁₋₄ haloalkoxy, CN, NO₂, aryl, heteroaryl, amino or dialkylamino),
 heteroaryl(C₁₋₄)alkyl (wherein the heteroaryl group is optionally substituted by halo, nitro,
 cyano, C₁₋₆ alkyl, C₁₋₆ haloalkyl, C₁₋₆ alkoxy or C₁₋₆ haloalkoxy), heterocyclyl(C₁₋₄)alkyl
 (wherein the heterocyclyl group is optionally substituted by halo, nitro, cyano, C₁₋₆ alkyl, C₁₋₆
 10 haloalkyl, C₁₋₆ alkoxy or C₁₋₆ haloalkoxy), C₂₋₆ alkenyl, aminocarbonyl(C₂₋₆)alkenyl, C₁₋₆
 alkylaminocarbonyl(C₂₋₆)alkenyl, di(C₁₋₆)alkylaminocarbonyl(C₂₋₆)alkenyl, phenyl(C₂₋₄)-
 alkenyl, (wherein the phenyl group is optionally substituted by halogen, C₁₋₄ alkyl, C₁₋₄
 alkoxy, C₁₋₄ haloalkyl, C₁₋₄ haloalkoxy, CN, NO₂, aryl, heteroaryl, amino or dialkylamino),
 C₂₋₆ alkynyl, trimethylsilyl(C₂₋₆)alkynyl, aminocarbonyl(C₂₋₆)alkynyl, C₁₋₆
 15 alkylaminocarbonyl(C₂₋₆)alkynyl, di(C₁₋₆)alkylaminocarbonyl(C₂₋₆)alkynyl, C₁₋₆
 alkoxy carbonyl, C₃₋₇ cycloalkyl, C₃₋₇ halocycloalkyl, C₃₋₇ cyanocycloalkyl, C₁₋₃ alkyl(C₃₋₇)-
 cycloalkyl, C₁₋₃ alkyl(C₃₋₇)halocycloalkyl, phenyl (optionally substituted by halogen, C₁₋₄
 alkyl, C₁₋₄ alkoxy, C₁₋₄ haloalkyl, C₁₋₄ haloalkoxy, CN, NO₂, aryl, heteroaryl, amino or
 dialkylamino), heteroaryl (optionally substituted by halo, nitro, cyano, C₁₋₆ alkyl, C₁₋₆
 20 haloalkyl, C₁₋₆ alkoxy or C₁₋₆ haloalkoxy), heterocyclyl (wherein the heterocyclyl group is
 optionally substituted by halo, nitro, cyano, C₁₋₆ alkyl, C₁₋₆ haloalkyl, C₁₋₆ alkoxy or C₁₋₆
 haloalkoxy), or 2 adjacent groups R⁴ together with the carbon atoms to which they are
 attached form a 4, 5, 6 or 7 membered carbocyclic or heterocyclic ring which may be
 optionally substituted by halogen, C₁₋₈ alkoxy, C₁₋₆ haloalkoxy, phenoxy (optionally
 25 substituted by halo, nitro, cyano, C₁₋₆ alkyl, C₁₋₆ haloalkyl, C₁₋₆ alkoxy or C₁₋₆ haloalkoxy),
 heteroaryloxy (optionally substituted by halo, nitro, cyano, C₁₋₆ alkyl, C₁₋₆ haloalkyl, C₁₋₆
 alkoxy or C₁₋₆ haloalkoxy), C₁₋₈ alkylthio or R¹⁹R²⁰N where R¹⁹ and R²⁰ are, independently,
 hydrogen, C₁₋₈ alkyl, C₃₋₇ cycloalkyl, C₃₋₆ alkenyl, C₃₋₆ alkynyl, C₂₋₆ haloalkyl, C₁₋₆
 alkoxy carbonyl or R¹⁹ and R²⁰ together with the N atom to which they are attached form a
 30 five, six or seven-membered heterocyclic ring which may contain one or two further
 heteroatoms selected from O, N or S and which may be optionally substituted by one or two
 C₁₋₆ alkyl groups; n is 0, 1, 2 or 3.

More preferably each R^4 is independently halogen, cyano, C_{1-8} alkyl, C_{1-8} haloalkyl, C_{1-8} cyanoalkyl, C_{1-6} alkoxy(C_{1-6})alkyl, C_{2-6} alkynyl, trimethylsilyl(C_{2-6})alkynyl, C_{1-6} alkoxy carbonyl, C_{3-7} cycloalkyl, C_{1-3} alkyl (C_{3-7}) cycloalkyl, phenyl (optionally substituted by halogen, C_{1-4} alkyl, C_{1-4} alkoxy, C_{1-4} haloalkyl, C_{1-4} haloalkoxy, CN, NO_2 , aryl, heteroaryl, amino or dialkylamino), heterocyclyl (optionally substituted by halo, nitro, cyano, C_{1-6} alkyl, C_{1-6} haloalkyl, C_{1-6} alkoxy or C_{1-6} haloalkoxy), C_{1-8} alkoxy, C_{1-6} haloalkoxy, phenoxy (optionally substituted by halogen, C_{1-4} alkyl, C_{1-4} alkoxy, C_{1-4} haloalkyl, C_{1-4} haloalkoxy, CN, NO_2 , aryl, heteroaryl, amino or dialkylamino), heteroaryloxy (optionally substituted by halo, nitro, cyano, C_{1-3} alkyl, C_{1-3} haloalkyl, C_{1-3} alkoxy or C_{1-3} haloalkoxy), di(C_{1-8})alkylamino, or 2 adjacent groups R^4 together with the carbon atoms to which they are attached form a 4, 5, 6 or 7 membered carbocyclic or heterocyclic ring which may be optionally substituted by halogen; n is 0, 1, 2 or 3.

Even more preferably each R^4 is independently halogen, cyano, C_{1-8} alkyl, C_{1-8} haloalkyl, C_{1-8} cyanoalkyl, C_{1-6} alkoxy(C_{1-6})alkyl, C_{2-6} alkynyl, heterocyclyl (optionally substituted by C_{1-6} alkyl), C_{1-8} alkoxy, C_{1-6} haloalkoxy, phenoxy (optionally substituted by halo, cyano, C_{1-3} alkyl or C_{1-3} haloalkyl), heteroaryloxy (optionally substituted by halo, cyano, C_{1-3} alkyl or C_{1-3} haloalkyl), di(C_{1-8})alkylamino or 2 adjacent groups R^4 together with the carbon atoms to which they are attached form a 4, 5, 6 or 7 membered carbocyclic or heterocyclic ring which may be optionally substituted by halogen; n is 0, 1, 2 or 3.

Yet more preferably each R^4 is independently fluoro, chloro, bromo, cyano, C_{1-4} alkyl, C_{1-4} haloalkyl, C_{1-4} cyanoalkyl or C_{1-3} alkoxy(C_{1-3})alkyl; n is 0, 1 or 2.

Most preferably each R^4 is independently fluoro, chloro, bromo, C_{1-4} alkyl or C_{1-4} haloalkyl; n is 1 or 2.

Preferably R^8 is C_{1-10} alkyl, C_{1-10} haloalkyl, aryl(C_{1-6})alkyl (wherein the aryl group is optionally substituted by halogen, C_{1-4} alkyl, C_{1-4} alkoxy, C_{1-4} haloalkyl, C_{1-4} haloalkoxy, CN, NO_2 , aryl, heteroaryl, amino or dialkylamino), heteroaryl(C_{1-6})alkyl (wherein the heteroaryl group is optionally substituted by halogen, C_{1-4} alkyl, C_{1-4} alkoxy, C_{1-4} haloalkyl, C_{1-4} haloalkoxy, CN, NO_2 , aryl, heteroaryl, amino or dialkylamino), arylcarbonyl-(C_{1-6})alkyl (wherein the aryl group may be optionally substituted by halogen, C_{1-4} alkyl, C_{1-4} alkoxy, C_{1-4} haloalkyl, C_{1-4} haloalkoxy, CN, NO_2 , aryl, heteroaryl, amino or dialkylamino and the alkyl group may be optionally substituted by aryl), C_{2-8} alkenyl, C_{2-8} haloalkenyl, aryl(C_{2-6})-alkenyl (wherein the aryl group is optionally substituted halogen, C_{1-4} alkyl, C_{1-4} alkoxy, C_{1-4}

haloalkyl, C₁₋₄ haloalkoxy, CN, NO₂, aryl, heteroaryl, amino or dialkylamino, C₁₋₆ alkoxy carbonyl, or two adjacent substituents can cyclise to form a 5, 6 or 7 membered carbocyclic or heterocyclic ring), heteroaryl(C₂₋₆)-alkenyl (wherein the heteroaryl group is optionally substituted halogen, C₁₋₄ alkyl, C₁₋₄ alkoxy, C₁₋₄ haloalkyl, C₁₋₄ haloalkoxy, CN, NO₂, aryl, heteroaryl, amino or dialkylamino, C₁₋₆ alkoxy carbonyl, or two adjacent substituents can cyclise to form a 5, 6 or 7 membered carbocyclic or heterocyclic ring), C₂₋₆ alkynyl, phenyl(C₂₋₆)alkynyl (wherein the phenyl group is optionally substituted by halogen, C₁₋₄ alkyl, C₁₋₄ alkoxy, C₁₋₄ haloalkyl, C₁₋₄ haloalkoxy, CN, NO₂, aryl, heteroaryl, amino or dialkylamino), C₃₋₇ cycloalkyl, C₁₋₆ alkoxy carbonyl, C₁₋₆ alkyl carbonyl, C₁₋₆ haloalkyl carbonyl or aryl(C₂₋₆)alkenyl carbonyl (wherein the aryl group may be optionally substituted halogen, C₁₋₄ alkyl, C₁₋₄ alkoxy, C₁₋₄ haloalkyl, C₁₋₄ haloalkoxy, CN, NO₂, aryl, heteroaryl, amino or dialkylamino), or $-C(R^{51})(R^{52})-[CR^{53}=CR^{54}]_z-R^{55}$ where z is 1 or 2, R⁵¹ and R⁵² are each independently H, halo or C₁₋₂ alkyl, R⁵³ and R⁵⁴ are each independently H, halogen, C₁₋₄ alkyl or C₁₋₄ haloalkyl and R⁵⁵ is optionally substituted aryl or optionally substituted heteroaryl.

More preferably R⁸ is phenyl(C₁₋₄)alkyl (wherein the phenyl group is optionally substituted by halogen, C₁₋₄ alkyl, C₁₋₄ alkoxy, C₁₋₄ haloalkyl, C₁₋₄ haloalkoxy, CN, NO₂, aryl, heteroaryl, amino or dialkylamino), heteroaryl(C₁₋₆)alkyl (wherein the heteroaryl group is optionally substituted halogen, C₁₋₄ alkyl, C₁₋₄ alkoxy, C₁₋₄ haloalkyl, C₁₋₄ haloalkoxy, CN, NO₂, aryl, heteroaryl, amino or dialkylamino), phenyl(C₂₋₆)alkenyl (wherein the phenyl group is optionally substituted by halogen, C₁₋₄ alkyl, C₁₋₄ alkoxy, C₁₋₄ haloalkyl, C₁₋₄ haloalkoxy, CN, NO₂, aryl, heteroaryl, amino or dialkylamino), heteroaryl(C₂₋₆)alkenyl (wherein the heteroaryl group is optionally substituted by halogen, C₁₋₄ alkyl, C₁₋₄ alkoxy, C₁₋₄ haloalkyl, C₁₋₄ haloalkoxy, CN, NO₂, aryl, heteroaryl, amino or dialkylamino) or phenyl(C₂₋₆)alkynyl (wherein the phenyl group is optionally substituted by halogen, C₁₋₄ alkyl, C₁₋₄ alkoxy, C₁₋₄ haloalkyl, C₁₋₄ haloalkoxy, CN, NO₂, aryl, heteroaryl, amino or dialkylamino, or $-C(R^{51})(R^{52})-[CR^{53}=CR^{54}]_z-R^{55}$ where z is 1 or 2, R⁵¹ and R⁵² are each independently H, halo or C₁₋₂ alkyl, R⁵³ and R⁵⁴ are each independently H, halogen, C₁₋₄ alkyl or C₁₋₄ haloalkyl and R⁵⁵ is optionally substituted aryl or optionally substituted heteroaryl).

Most preferably R⁸ is $-C(R^{51})(R^{52})-[CR^{53}=CR^{54}]_z-R^{55}$ where z is 1 or 2, preferably 1, R⁵¹ and R⁵² are each independently H, halo or C₁₋₂ alkyl, R⁵³ and R⁵⁴ are each independently H, halogen, C₁₋₄ alkyl or C₁₋₄ haloalkyl and R⁵⁵ is phenyl substituted by halogen, C₁₋₄ alkyl,

C₁₋₄ alkoxy, C₁₋₄ haloalkyl, C₁₋₄ haloalkoxy, CN, NO₂, aryl, heteroaryl, amino or dialkylamino or heteroaryl substituted by halogen, C₁₋₄ alkyl, C₁₋₄ alkoxy, C₁₋₄ haloalkyl, C₁₋₄ haloalkoxy, CN, NO₂, aryl, heteroaryl, amino or dialkylamino.

R⁵¹ and R⁵² are preferably hydrogen.

5 R⁵³ and R⁵⁴ are preferably hydrogen or halogen, especially hydrogen.

R⁵⁵ is preferably phenyl substituted with one to three substituents selected from halogen, C₁₋₄ alkyl, C₁₋₄ alkoxy, C₁₋₄ haloalkyl, C₁₋₄ haloalkoxy, CN, NO₂, aryl, heteroaryl, amino or dialkylamino.

10 Preferably A₁, A₂, A₃, A₄, B₁, B₂, B₃ and B₄ are independently each hydrogen, halo, cyano, C₁₋₃ alkyl, hydroxy or two groups attached to the same carbon atom together with the carbon atom form a carbonyl group.

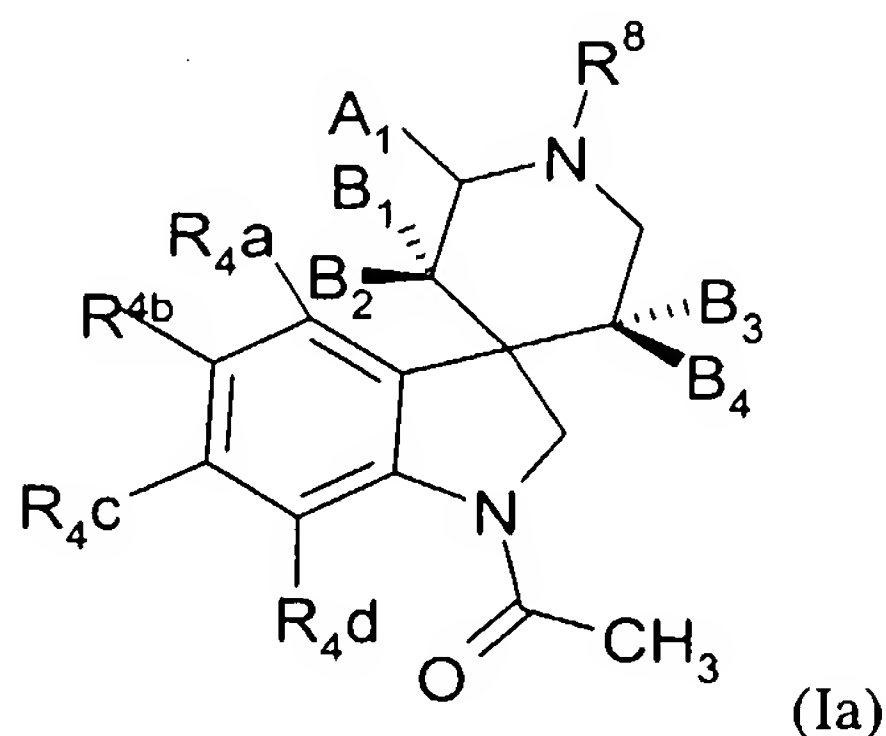
More preferably A₁, A₂, A₃, A₄, B₁, B₂, B₃ and B₄ are independently hydrogen, fluoro, methyl, hydroxy or two groups or two groups attached to the same carbon atom together with the carbon atom form a carbonyl group.

15 One group of preferred compounds of formula (I) are those where Y is C(O) and R¹ is NR¹³R¹⁴ where R¹³ and R¹⁴ are as defined above.

The compounds in Tables I to MCLXVII below illustrate the compounds of the invention.

Table I provides 782 compounds of formula Ia

20



wherein A₁ is hydrogen, B₁ is CH₃, B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1

25

Table 1

Compound No	R ⁸	R ^{4a}	R ^{4b}	R ^{4c}	R ^{4d}
I-1	4-chlorobenzyl	H	H	H	H
I-2	Cinnamyl	H	H	H	H
I-3	4-chlorocinnamyl	H	H	H	H
I-4	4-fluorocinnamyl	H	H	H	H
I-5	4-bromocinnamyl	H	H	H	H
I-6	4-trifluoromethylcinnamyl	H	H	H	H
I-7	4-trifluoromethoxycinnamyl	H	H	H	H
I-8	4-pentafluoroethoxycinnamyl	H	H	H	H
I-9	4-methoxycinnamyl	H	H	H	H
I-10	4-ethoxycinnamyl	H	H	H	H
I-11	4-cyanocinnamyl	H	H	H	H
I-12	3-(6-chloro-pyridin-3-yl)-allyl	H	H	H	H
I-13	3-(4-chlorophenyl)-but-2-enyl	H	H	H	H
I-14	3-(4-chlorophenyl)-3-fluoro-allyl	H	H	H	H
I-15	3-chloro-4-fluoro-cinnamyl	H	H	H	H
I-16	3,5-dichloro-cinnamyl	H	H	H	H
I-17	5-phenyl-penta-2,4-dienyl	H	H	H	H
I-18	4-isopropyloxycarbonylamino-cinnamyl	H	H	H	H
I-19	3-naphthalen-2-yl-allyl	H	H	H	H
I-20	3-(5-trifluoromethyl-pyridin-2-yl)-allyl	H	H	H	H
I-21	3-(5-chloro-pyridin-2-yl)-allyl	H	H	H	H
I-22	3-pyridin-4-yl-allyl	H	H	H	H
I-23	3-(2-Chloro-pyridin-4-yl)-allyl	H	H	H	H
I-24	4-chlorobenzyl	H	F	H	H
I-25	Cinnamyl	H	F	H	H
I-26	4-chlorocinnamyl	H	F	H	H
I-27	4-fluorocinnamyl	H	F	H	H
I-28	4-bromocinnamyl	H	F	H	H

I-29	4-trifluoromethylcinnamyl	H	F	H	H
I-30	4-trifluoromethoxycinnamyl	H	F	H	H
I-31	4-pentafluoroethoxycinnamyl	H	F	H	H
I-32	4-methoxycinnamyl	H	F	H	H
I-33	4-ethoxycinnamyl	H	F	H	H
I-34	4-cyanocinnamyl	H	F	H	H
I-35	3-(6-chloro-pyridin-3-yl)-allyl	H	F	H	H
I-36	3-(4-chlorophenyl)-but-2-enyl	H	F	H	H
I-37	3-(4-chlorophenyl)-3-fluoro-allyl	H	F	H	H
I-38	3-chloro-4-fluoro-cinnamyl	H	F	H	H
I-39	3,5-dichloro-cinnamyl	H	F	H	H
I-40	5-phenyl-penta-2,4-dienyl	H	F	H	H
I-41	4-isopropyloxycarbonylamino-cinnamyl	H	F	H	H
I-42	3-naphthalen-2-yl-allyl	H	F	H	H
I-43	3-(5-trifluoromethyl-pyridin-2-yl)-allyl	H	F	H	H
I-44	3-(5-chloro-pyridin-2-yl)-allyl	H	F	H	H
I-45	3-pyridin-4-yl-allyl	H	F	H	H
I-46	3-(2-Chloro-pyridin-4-yl)-allyl	H	F	H	H
I-47	4-chlorobenzyl	H	Cl	H	H
I-48	Cinnamyl	H	Cl	H	H
I-49	4-chlorocinnamyl	H	Cl	H	H
I-50	4-fluorocinnamyl	H	Cl	H	H
I-51	4-bromocinnamyl	H	Cl	H	H
I-52	4-trifluoromethylcinnamyl	H	Cl	H	H
I-53	4-trifluoromethoxycinnamyl	H	Cl	H	H
I-54	4-pentafluoroethoxycinnamyl	H	Cl	H	H
I-55	4-methoxycinnamyl	H	Cl	H	H
I-56	4-ethoxycinnamyl	H	Cl	H	H
I-57	4-cyanocinnamyl	H	Cl	H	H
I-58	3-(6-chloro-pyridin-3-yl)-allyl	H	Cl	H	H
I-59	3-(4-chlorophenyl)-but-2-enyl	H	Cl	H	H

I-60	3-(4-chlorophenyl)-3-fluoro-allyl	H	Cl	H	H
I-61	3-chloro-4-fluoro-cinnamyl	H	Cl	H	H
I-62	3,5-dichloro-cinnamyl	H	Cl	H	H
I-63	5-phenyl-penta-2,4-dienyl	H	Cl	H	H
I-64	4-isopropoxyloxycarbonylamino-cinnamyl	H	Cl	H	H
I-65	3-naphthalen-2-yl-allyl	H	Cl	H	H
I-66	3-(5-trifluoromethyl-pyridin-2-yl)-allyl	H	Cl	H	H
I-67	3-(5-chloro-pyridin-2-yl)-allyl	H	Cl	H	H
I-68	3-pyridin-4-yl-allyl	H	Cl	H	H
I-69	3-(2-Chloro-pyridin-4-yl)-allyl	H	Cl	H	H
I-70	4-chlorobenzyl	H	Br	H	H
I-71	Cinnamyl	H	Br	H	H
I-72	4-chlorocinnamyl	H	Br	H	H
I-73	4-fluorocinnamyl	H	Br	H	H
I-74	4-bromocinnamyl	H	Br	H	H
I-75	4-trifluoromethylcinnamyl	H	Br	H	H
I-76	4-trifluoromethoxycinnamyl	H	Br	H	H
I-77	4-pentafluoroethoxycinnamyl	H	Br	H	H
I-78	4-methoxycinnamyl	H	Br	H	H
I-79	4-ethoxycinnamyl	H	Br	H	H
I-80	4-cyanocinnamyl	H	Br	H	H
I-81	3-(6-chloro-pyridin-3-yl)-allyl	H	Br	H	H
I-82	3-(4-chlorophenyl)-but-2-enyl	H	Br	H	H
I-83	3-(4-chlorophenyl)-3-fluoro-allyl	H	Br	H	H
I-84	3-chloro-4-fluoro-cinnamyl	H	Br	H	H
I-85	3,5-dichloro-cinnamyl	H	Br	H	H
I-86	5-phenyl-penta-2,4-dienyl	H	Br	H	H
I-87	4-isopropoxyloxycarbonylamino-cinnamyl	H	Br	H	H
I-88	3-naphthalen-2-yl-allyl	H	Br	H	H
I-89	3-(5-trifluoromethyl-pyridin-2-yl)-allyl	H	Br	H	H
I-90	3-(5-chloro-pyridin-2-yl)-allyl	H	Br	H	H

I-91	3-pyridin-4-yl-allyl	H	Br	H	H
I-92	3-(2-Chloro-pyridin-4-yl)-allyl	H	Br	H	H
I-93	4-chlorobenzyl	H	CN	H	H
I-94	Cinnamyl	H	CN	H	H
I-95	4-chlorocinnamyl	H	CN	H	H
I-96	4-fluorocinnamyl	H	CN	H	H
I-97	4-bromocinnamyl	H	CN	H	H
I-98	4-trifluoromethylcinnamyl	H	CN	H	H
I-99	4-trifluoromethoxycinnamyl	H	CN	H	H
I-100	4-pentafluoroethoxycinnamyl	H	CN	H	H
I-101	4-methoxycinnamyl	H	CN	H	H
I-102	4-ethoxycinnamyl	H	CN	H	H
I-103	4-cyanocinnamyl	H	CN	H	H
I-104	3-(6-chloro-pyridin-3-yl)-allyl	H	CN	H	H
I-105	3-(4-chlorophenyl)-but-2-enyl	H	CN	H	H
I-106	3-(4-chlorophenyl)-3-fluoro-allyl	H	CN	H	H
I-107	3-chloro-4-fluoro-cinnamyl	H	CN	H	H
I-108	3,5-dichloro-cinnamyl	H	CN	H	H
I-109	5-phenyl-penta-2,4-dienyl	H	CN	H	H
I-110	4-isopropoxyloxycarbonylamino-cinnamyl	H	CN	H	H
I-111	3-naphthalen-2-yl-allyl	H	CN	H	H
I-112	3-(5-trifluoromethyl-pyridin-2-yl)-allyl	H	CN	H	H
I-113	3-(5-chloro-pyridin-2-yl)-allyl	H	CN	H	H
I-114	3-pyridin-4-yl-allyl	H	CN	H	H
I-115	3-(2-Chloro-pyridin-4-yl)-allyl	H	CN	H	H
I-116	4-chlorobenzyl	H	OMe	H	H
I-117	Cinnamyl	H	OMe	H	H
I-118	4-chlorocinnamyl	H	OMe	H	H
I-119	4-fluorocinnamyl	H	OMe	H	H
I-120	4-bromocinnamyl	H	OMe	H	H
I-121	4-trifluoromethylcinnamyl	H	OMe	H	H

I-122	4-trifluoromethoxycinnamyl	H	OMe	H	H
I-123	4-pentafluoroethoxycinnamyl	H	OMe	H	H
I-124	4-methoxycinnamyl	H	OMe	H	H
I-125	4-ethoxycinnamyl	H	OMe	H	H
I-126	4-cyanocinnamyl	H	OMe	H	H
I-127	3-(6-chloro-pyridin-3-yl)-allyl	H	OMe	H	H
I-128	3-(4-chlorophenyl)-but-2-enyl	H	OMe	H	H
I-129	3-(4-chlorophenyl)-3-fluoro-allyl	H	OMe	H	H
I-130	3-chloro-4-fluoro-cinnamyl	H	OMe	H	H
I-131	3,5-dichloro-cinnamyl	H	OMe	H	H
I-132	5-phenyl-penta-2,4-dienyl	H	OMe	H	H
I-133	4-isopropoxyloxycarbonylamino-cinnamyl	H	OMe	H	H
I-134	3-naphthalen-2-yl-allyl	H	OMe	H	H
I-135	3-(5-trifluoromethyl-pyridin-2-yl)-allyl	H	OMe	H	H
I-136	3-(5-chloro-pyridin-2-yl)-allyl	H	OMe	H	H
I-137	3-pyridin-4-yl-allyl	H	OMe	H	H
I-138	3-(2-Chloro-pyridin-4-yl)-allyl	H	OMe	H	H
I-139	4-chlorobenzyl	H	OCF ₃	H	H
I-140	Cinnamyl	H	OCF ₃	H	H
I-141	4-chlorocinnamyl	H	OCF ₃	H	H
I-142	4-fluorocinnamyl	H	OCF ₃	H	H
I-143	4-bromocinnamyl	H	OCF ₃	H	H
I-144	4-trifluoromethylcinnamyl	H	OCF ₃	H	H
I-145	4-trifluoromethoxycinnamyl	H	OCF ₃	H	H
I-146	4-pentafluoroethoxycinnamyl	H	OCF ₃	H	H
I-147	4-methoxycinnamyl	H	OCF ₃	H	H
I-148	4-ethoxycinnamyl	H	OCF ₃	H	H
I-149	4-cyanocinnamyl	H	OCF ₃	H	H
I-150	3-(6-chloro-pyridin-3-yl)-allyl	H	OCF ₃	H	H
I-151	3-(4-chlorophenyl)-but-2-enyl	H	OCF ₃	H	H
I-152	3-(4-chlorophenyl)-3-fluoro-allyl	H	OCF ₃	H	H

I-153	3-chloro-4-fluoro-cinnamyl	H	OCF ₃	H	H
I-154	3,5-dichloro-cinnamyl	H	OCF ₃	H	H
I-155	5-phenyl-penta-2,4-dienyl	H	OCF ₃	H	H
I-156	4-isopropoxyloxycarbonylamino-cinnamyl	H	OCF ₃	H	H
I-157	3-naphthalen-2-yl-allyl	H	OCF ₃	H	H
I-158	3-(5-trifluoromethyl-pyridin-2-yl)-allyl	H	OCF ₃	H	H
I-159	3-(5-chloro-pyridin-2-yl)-allyl	H	OCF ₃	H	H
I-160	3-pyridin-4-yl-allyl	H	OCF ₃	H	H
I-161	3-(2-Chloro-pyridin-4-yl)-allyl	H	OCF ₃	H	H
I-162	4-chlorobenzyl	H	CH ₃	H	H
I-163	Cinnamyl	H	CH ₃	H	H
I-164	4-chlorocinnamyl	H	CH ₃	H	H
I-165	4-fluorocinnamyl	H	CH ₃	H	H
I-166	4-bromocinnamyl	H	CH ₃	H	H
I-167	4-trifluoromethylcinnamyl	H	CH ₃	H	H
I-168	4-trifluoromethoxycinnamyl	H	CH ₃	H	H
I-169	4-pentafluoroethoxycinnamyl	H	CH ₃	H	H
I-170	4-methoxycinnamyl	H	CH ₃	H	H
I-171	4-ethoxycinnamyl	H	CH ₃	H	H
I-172	4-cyanocinnamyl	H	CH ₃	H	H
I-173	3-(6-chloro-pyridin-3-yl)-allyl	H	CH ₃	H	H
I-174	3-(4-chlorophenyl)-but-2-enyl	H	CH ₃	H	H
I-175	3-(4-chlorophenyl)-3-fluoro-allyl	H	CH ₃	H	H
I-176	3-chloro-4-fluoro-cinnamyl	H	CH ₃	H	H
I-177	3,5-dichloro-cinnamyl	H	CH ₃	H	H
I-178	5-phenyl-penta-2,4-dienyl	H	CH ₃	H	H
I-179	4-isopropoxyloxycarbonylamino-cinnamyl	H	CH ₃	H	H
I-180	3-naphthalen-2-yl-allyl	H	CH ₃	H	H
I-181	3-(5-trifluoromethyl-pyridin-2-yl)-allyl	H	CH ₃	H	H
I-182	3-(5-chloro-pyridin-2-yl)-allyl	H	CH ₃	H	H
I-183	3-pyridin-4-yl-allyl	H	CH ₃	H	H

I-184	3-(2-Chloro-pyridin-4-yl)-allyl	H	CH ₃	H	H
I-185	4-chlorobenzyl	H	CF ₃	H	H
I-186	Cinnamyl	H	CF ₃	H	H
I-187	4-chlorocinnamyl	H	CF ₃	H	H
I-188	4-fluorocinnamyl	H	CF ₃	H	H
I-189	4-bromocinnamyl	H	CF ₃	H	H
I-190	4-trifluoromethylcinnamyl	H	CF ₃	H	H
I-191	4-trifluoromethoxycinnamyl	H	CF ₃	H	H
I-192	4-pentafluoroethoxycinnamyl	H	CF ₃	H	H
I-193	4-methoxycinnamyl	H	CF ₃	H	H
I-194	4-ethoxycinnamyl	H	CF ₃	H	H
I-195	4-cyanocinnamyl	H	CF ₃	H	H
I-196	3-(6-chloro-pyridin-3-yl)-allyl	H	CF ₃	H	H
I-197	3-(4-chlorophenyl)-but-2-enyl	H	CF ₃	H	H
I-198	3-(4-chlorophenyl)-3-fluoro-allyl	H	CF ₃	H	H
I-199	3-chloro-4-fluoro-cinnamyl	H	CF ₃	H	H
I-200	3,5-dichloro-cinnamyl	H	CF ₃	H	H
I-201	5-phenyl-penta-2,4-dienyl	H	CF ₃	H	H
I-202	4-isopropyloxycarbonylamino-cinnamyl	H	CF ₃	H	H
I-203	3-naphthalen-2-yl-allyl	H	CF ₃	H	H
I-204	3-(5-trifluoromethyl-pyridin-2-yl)-allyl	H	CF ₃	H	H
I-205	3-(5-chloro-pyridin-2-yl)-allyl	H	CF ₃	H	H
I-206	3-pyridin-4-yl-allyl	H	CF ₃	H	H
I-207	3-(2-Chloro-pyridin-4-yl)-allyl	H	CF ₃	H	H
I-208	4-chlorobenzyl	H	H	Cl	H
I-209	Cinnamyl	H	H	Cl	H
I-210	4-chlorocinnamyl	H	H	Cl	H
I-211	4-fluorocinnamyl	H	H	Cl	H
I-212	4-bromocinnamyl	H	H	Cl	H
I-213	4-trifluoromethylcinnamyl	H	H	Cl	H
I-214	4-trifluoromethoxycinnamyl	H	H	Cl	H

I-215	4-pentafluoroethoxycinnamyl	H	H	Cl	H
I-216	4-methoxycinnamyl	H	H	Cl	H
I-217	4-ethoxycinnamyl	H	H	Cl	H
I-218	4-cyanocinnamyl	H	H	Cl	H
I-219	3-(6-chloro-pyridin-3-yl)-allyl	H	H	Cl	H
I-220	3-(4-chlorophenyl)-but-2-enyl	H	H	Cl	H
I-221	3-(4-chlorophenyl)-3-fluoro-allyl	H	H	Cl	H
I-222	3-chloro-4-fluoro-cinnamyl	H	H	Cl	H
I-223	3,5-dichloro-cinnamyl	H	H	Cl	H
I-224	5-phenyl-penta-2,4-dienyl	H	H	Cl	H
I-225	4-isopropyloxycarbonylamino-cinnamyl	H	H	Cl	H
I-226	3-naphthalen-2-yl-allyl	H	H	Cl	H
I-227	3-(5-trifluoromethyl-pyridin-2-yl)-allyl	H	H	Cl	H
I-228	3-(5-chloro-pyridin-2-yl)-allyl	H	H	Cl	H
I-229	3-pyridin-4-yl-allyl	H	H	Cl	H
I-230	3-(2-Chloro-pyridin-4-yl)-allyl	H	H	Cl	H
I-231	4-chlorobenzyl	H	H	F	H
I-232	Cinnamyl	H	H	F	H
I-233	4-chlorocinnamyl	H	H	F	H
I-234	4-fluorocinnamyl	H	H	F	H
I-235	4-bromocinnamyl	H	H	F	H
I-236	4-trifluoromethylcinnamyl	H	H	F	H
I-237	4-trifluoromethoxycinnamyl	H	H	F	H
I-238	4-pentafluoroethoxycinnamyl	H	H	F	H
I-239	4-methoxycinnamyl	H	H	F	H
I-240	4-ethoxycinnamyl	H	H	F	H
I-241	4-cyanocinnamyl	H	H	F	H
I-242	3-(6-chloro-pyridin-3-yl)-allyl	H	H	F	H
I-243	3-(4-chlorophenyl)-but-2-enyl	H	H	F	H
I-244	3-(4-chlorophenyl)-3-fluoro-allyl	H	H	F	H
I-245	3-chloro-4-fluoro-cinnamyl	H	H	F	H

I-246	3,5-dichloro-cinnamyl	H	H	F	H
I-247	5-phenyl-penta-2,4-dienyl	H	H	F	H
I-248	4-isopropyloxycarbonylamino-cinnamyl	H	H	F	H
I-249	3-naphthalen-2-yl-allyl	H	H	F	H
I-250	3-(5-trifluoromethyl-pyridin-2-yl)-allyl	H	H	F	H
I-251	3-(5-chloro-pyridin-2-yl)-allyl	H	H	F	H
I-252	3-pyridin-4-yl-allyl	H	H	F	H
I-253	3-(2-Chloro-pyridin-4-yl)-allyl	H	H	F	H
I-254	4-chlorobenzyl	H	H	Br	H
I-255	Cinnamyl	H	H	Br	H
I-256	4-chlorocinnamyl	H	H	Br	H
I-257	4-fluorocinnamyl	H	H	Br	H
I-258	4-bromocinnamyl	H	H	Br	H
I-259	4-trifluoromethylcinnamyl	H	H	Br	H
I-260	4-trifluoromethoxycinnamyl	H	H	Br	H
I-261	4-pentafluoroethoxycinnamyl	H	H	Br	H
I-262	4-methoxycinnamyl	H	H	Br	H
I-263	4-ethoxycinnamyl	H	H	Br	H
I-264	4-cyanocinnamyl	H	H	Br	H
I-265	3-(6-chloro-pyridin-3-yl)-allyl	H	H	Br	H
I-266	3-(4-chlorophenyl)-but-2-enyl	H	H	Br	H
I-267	3-(4-chlorophenyl)-3-fluoro-allyl	H	H	Br	H
I-268	3-chloro-4-fluoro-cinnamyl	H	H	Br	H
I-269	3,5-dichloro-cinnamyl	H	H	Br	H
I-270	5-phenyl-penta-2,4-dienyl	H	H	Br	H
I-271	4-isopropyloxycarbonylamino-cinnamyl	H	H	Br	H
I-272	3-naphthalen-2-yl-allyl	H	H	Br	H
I-273	3-(5-trifluoromethyl-pyridin-2-yl)-allyl	H	H	Br	H
I-274	3-(5-chloro-pyridin-2-yl)-allyl	H	H	Br	H
I-275	3-pyridin-4-yl-allyl	H	H	Br	H
I-276	3-(2-Chloro-pyridin-4-yl)-allyl	H	H	Br	H

I-277	4-chlorobenzyl	H	H	OCF ₃	H
I-278	Cinnamyl	H	H	OCF ₃	H
I-279	4-chlorocinnamyl	H	H	OCF ₃	H
I-280	4-fluorocinnamyl	H	H	OCF ₃	H
I-281	4-bromocinnamyl	H	H	OCF ₃	H
I-282	4-trifluoromethylcinnamyl	H	H	OCF ₃	H
I-283	4-trifluoromethoxycinnamyl	H	H	OCF ₃	H
I-284	4-pentafluoroethoxycinnamyl	H	H	OCF ₃	H
I-285	4-methoxycinnamyl	H	H	OCF ₃	H
I-286	4-ethoxycinnamyl	H	H	OCF ₃	H
I-287	4-cyanocinnamyl	H	H	OCF ₃	H
I-288	3-(6-chloro-pyridin-3-yl)-allyl	H	H	OCF ₃	H
I-289	3-(4-chlorophenyl)-but-2-enyl	H	H	OCF ₃	H
I-290	3-(4-chlorophenyl)-3-fluoro-allyl	H	H	OCF ₃	H
I-291	3-chloro-4-fluoro-cinnamyl	H	H	OCF ₃	H
I-292	3,5-dichloro-cinnamyl	H	H	OCF ₃	H
I-293	5-phenyl-penta-2,4-dienyl	H	H	OCF ₃	H
I-294	4-isopropoxyloxycarbonylamino-cinnamyl	H	H	OCF ₃	H
I-295	3-naphthalen-2-yl-allyl	H	H	OCF ₃	H
I-296	3-(5-trifluoromethyl-pyridin-2-yl)-allyl	H	H	OCF ₃	H
I-297	3-(5-chloro-pyridin-2-yl)-allyl	H	H	OCF ₃	H
I-298	3-pyridin-4-yl-allyl	H	H	OCF ₃	H
I-299	3-(2-Chloro-pyridin-4-yl)-allyl	H	H	OCF ₃	H
I-300	4-chlorobenzyl	H	H	CH ₃	H
I-301	Cinnamyl	H	H	CH ₃	H
I-302	4-chlorocinnamyl	H	H	CH ₃	H
I-303	4-fluorocinnamyl	H	H	CH ₃	H
I-304	4-bromocinnamyl	H	H	CH ₃	H
I-305	4-trifluoromethylcinnamyl	H	H	CH ₃	H
I-306	4-trifluoromethoxycinnamyl	H	H	CH ₃	H
I-307	4-pentafluoroethoxycinnamyl	H	H	CH ₃	H

I-308	4-methoxycinnamyl	H	H	CH ₃	H
I-309	4-ethoxycinnamyl	H	H	CH ₃	H
I-310	4-cyanocinnamyl	H	H	CH ₃	H
I-311	3-(6-chloro-pyridin-3-yl)-allyl	H	H	CH ₃	H
I-312	3-(4-chlorophenyl)-but-2-enyl	H	H	CH ₃	H
I-313	3-(4-chlorophenyl)-3-fluoro-allyl	H	H	CH ₃	H
I-314	3-chloro-4-fluoro-cinnamyl	H	H	CH ₃	H
I-315	3,5-dichloro-cinnamyl	H	H	CH ₃	H
I-316	5-phenyl-penta-2,4-dienyl	H	H	CH ₃	H
I-317	4-isopropoxyloxycarbonylamino-cinnamyl	H	H	CH ₃	H
I-318	3-naphthalen-2-yl-allyl	H	H	CH ₃	H
I-319	3-(5-trifluoromethyl-pyridin-2-yl)-allyl	H	H	CH ₃	H
I-320	3-(5-chloro-pyridin-2-yl)-allyl	H	H	CH ₃	H
I-321	3-pyridin-4-yl-allyl	H	H	CH ₃	H
I-322	3-(2-Chloro-pyridin-4-yl)-allyl	H	H	CH ₃	H
I-323	4-chlorobenzyl	H	H	CF ₃	H
I-324	Cinnamyl	H	H	CF ₃	H
I-325	4-chlorocinnamyl	H	H	CF ₃	H
I-326	4-fluorocinnamyl	H	H	CF ₃	H
I-327	4-bromocinnamyl	H	H	CF ₃	H
I-328	4-trifluoromethylcinnamyl	H	H	CF ₃	H
I-329	4-trifluoromethoxycinnamyl	H	H	CF ₃	H
I-330	4-pentafluoroethoxycinnamyl	H	H	CF ₃	H
I-331	4-methoxycinnamyl	H	H	CF ₃	H
I-332	4-ethoxycinnamyl	H	H	CF ₃	H
I-333	4-cyanocinnamyl	H	H	CF ₃	H
I-334	3-(6-chloro-pyridin-3-yl)-allyl	H	H	CF ₃	H
I-335	3-(4-chlorophenyl)-but-2-enyl	H	H	CF ₃	H
I-336	3-(4-chlorophenyl)-3-fluoro-allyl	H	H	CF ₃	H
I-337	3-chloro-4-fluoro-cinnamyl	H	H	CF ₃	H
I-338	3,5-dichloro-cinnamyl	H	H	CF ₃	H

I-339	5-phenyl-penta-2,4-dienyl	H	H	CF ₃	H
I-340	4-isopropyloxycarbonylamino-cinnamyl	H	H	CF ₃	H
I-341	3-naphthalen-2-yl-allyl	H	H	CF ₃	H
I-342	3-(5-trifluoromethyl-pyridin-2-yl)-allyl	H	H	CF ₃	H
I-343	3-(5-chloro-pyridin-2-yl)-allyl	H	H	CF ₃	H
I-344	3-pyridin-4-yl-allyl	H	H	CF ₃	H
I-345	3-(2-Chloro-pyridin-4-yl)-allyl	H	H	CF ₃	H
I-346	4-chlorobenzyl	F	H	H	H
I-347	Cinnamyl	F	H	H	H
I-348	4-chlorocinnamyl	F	H	H	H
I-349	4-fluorocinnamyl	F	H	H	H
I-350	4-bromocinnamyl	F	H	H	H
I-351	4-trifluoromethylcinnamyl	F	H	H	H
I-352	4-trifluoromethoxycinnamyl	F	H	H	H
I-353	4-pentafluoroethoxycinnamyl	F	H	H	H
I-354	4-methoxycinnamyl	F	H	H	H
I-355	4-ethoxycinnamyl	F	H	H	H
I-356	4-cyanocinnamyl	F	H	H	H
I-357	3-(6-chloro-pyridin-3-yl)-allyl	F	H	H	H
I-358	3-(4-chlorophenyl)-but-2-enyl	F	H	H	H
I-359	3-(4-chlorophenyl)-3-fluoro-allyl	F	H	H	H
I-360	3-chloro-4-fluoro-cinnamyl	F	H	H	H
I-361	3,5-dichloro-cinnamyl	F	H	H	H
I-362	5-phenyl-penta-2,4-dienyl	F	H	H	H
I-363	4-isopropyloxycarbonylamino-cinnamyl	F	H	H	H
I-364	3-naphthalen-2-yl-allyl	F	H	H	H
I-365	3-(5-trifluoromethyl-pyridin-2-yl)-allyl	F	H	H	H
I-366	3-(5-chloro-pyridin-2-yl)-allyl	F	H	H	H
I-367	3-pyridin-4-yl-allyl	F	H	H	H
I-368	3-(2-Chloro-pyridin-4-yl)-allyl	F	H	H	H
I-369	4-chlorobenzyl	Cl	H	H	H

I-370	Cinnamyl	Cl	H	H	H
I-371	4-chlorocinnamyl	Cl	H	H	H
I-372	4-fluorocinnamyl	Cl	H	H	H
I-373	4-bromocinnamyl	Cl	H	H	H
I-374	4-trifluoromethylcinnamyl	Cl	H	H	H
I-375	4-trifluoromethoxycinnamyl	Cl	H	H	H
I-376	4-pentafluoroethoxycinnamyl	Cl	H	H	H
I-377	4-methoxycinnamyl	Cl	H	H	H
I-378	4-ethoxycinnamyl	Cl	H	H	H
I-379	4-cyanocinnamyl	Cl	H	H	H
I-380	3-(6-chloro-pyridin-3-yl)-allyl	Cl	H	H	H
I-381	3-(4-chlorophenyl)-but-2-enyl	Cl	H	H	H
I-382	3-(4-chlorophenyl)-3-fluoro-allyl	Cl	H	H	H
I-383	3-chloro-4-fluoro-cinnamyl	Cl	H	H	H
I-384	3,5-dichloro-cinnamyl	Cl	H	H	H
I-385	5-phenyl-penta-2,4-dienyl	Cl	H	H	H
I-386	4-isopropyloxycarbonylamino-cinnamyl	Cl	H	H	H
I-387	3-naphthalen-2-yl-allyl	Cl	H	H	H
I-388	3-(5-trifluoromethyl-pyridin-2-yl)-allyl	Cl	H	H	H
I-389	3-(5-chloro-pyridin-2-yl)-allyl	Cl	H	H	H
I-390	3-pyridin-4-yl-allyl	Cl	H	H	H
I-391	3-(2-Chloro-pyridin-4-yl)-allyl	Cl	H	H	H
I-392	4-chlorobenzyl	Br	H	H	H
I-393	Cinnamyl	Br	H	H	H
I-394	4-chlorocinnamyl	Br	H	H	H
I-395	4-fluorocinnamyl	Br	H	H	H
I-396	4-bromocinnamyl	Br	H	H	H
I-397	4-trifluoromethylcinnamyl	Br	H	H	H
I-398	4-trifluoromethoxycinnamyl	Br	H	H	H
I-399	4-pentafluoroethoxycinnamyl	Br	H	H	H
I-400	4-methoxycinnamyl	Br	H	H	H

I-401	4-ethoxycinnamyl	Br	H	H	H
I-402	4-cyanocinnamyl	Br	H	H	H
I-403	3-(6-chloro-pyridin-3-yl)-allyl	Br	H	H	H
I-404	3-(4-chlorophenyl)-but-2-enyl	Br	H	H	H
I-405	3-(4-chlorophenyl)-3-fluoro-allyl	Br	H	H	H
I-406	3-chloro-4-fluoro-cinnamyl	Br	H	H	H
I-407	3,5-dichloro-cinnamyl	Br	H	H	H
I-408	5-phenyl-penta-2,4-dienyl	Br	H	H	H
I-409	4-isopropyloxycarbonylamino-cinnamyl	Br	H	H	H
I-410	3-naphthalen-2-yl-allyl	Br	H	H	H
I-411	3-(5-trifluoromethyl-pyridin-2-yl)-allyl	Br	H	H	H
I-412	3-(5-chloro-pyridin-2-yl)-allyl	Br	H	H	H
I-413	3-pyridin-4-yl-allyl	Br	H	H	H
I-414	3-(2-Chloro-pyridin-4-yl)-allyl	Br	H	H	H
I-415	4-chlorobenzyl	CF ₃	H	H	H
I-416	Cinnamyl	CF ₃	H	H	H
I-417	4-chlorocinnamyl	CF ₃	H	H	H
I-418	4-fluorocinnamyl	CF ₃	H	H	H
I-419	4-bromocinnamyl	CF ₃	H	H	H
I-420	4-trifluoromethylcinnamyl	CF ₃	H	H	H
I-421	4-trifluoromethoxycinnamyl	CF ₃	H	H	H
I-422	4-pentafluoroethoxycinnamyl	CF ₃	H	H	H
I-423	4-methoxycinnamyl	CF ₃	H	H	H
I-424	4-ethoxycinnamyl	CF ₃	H	H	H
I-425	4-cyanocinnamyl	CF ₃	H	H	H
I-426	3-(6-chloro-pyridin-3-yl)-allyl	CF ₃	H	H	H
I-427	3-(4-chlorophenyl)-but-2-enyl	CF ₃	H	H	H
I-428	3-(4-chlorophenyl)-3-fluoro-allyl	CF ₃	H	H	H
I-429	3-chloro-4-fluoro-cinnamyl	CF ₃	H	H	H
I-430	3,5-dichloro-cinnamyl	CF ₃	H	H	H
I-431	5-phenyl-penta-2,4-dienyl	CF ₃	H	H	H

I-432	4-isopropoxyloxycarbonylamino-cinnamyl	CF ₃	H	H	H
I-433	3-naphthalen-2-yl-allyl	CF ₃	H	H	H
I-434	3-(5-trifluoromethyl-pyridin-2-yl)-allyl	CF ₃	H	H	H
I-435	3-(5-chloro-pyridin-2-yl)-allyl	CF ₃	H	H	H
I-436	3-pyridin-4-yl-allyl	CF ₃	H	H	H
I-437	3-(2-Chloro-pyridin-4-yl)-allyl	CF ₃	H	H	H
I-438	4-chlorobenzyl	H	H	H	F
I-439	Cinnamyl	H	H	H	F
I-440	4-chlorocinnamyl	H	H	H	F
I-441	4-fluorocinnamyl	H	H	H	F
I-442	4-bromocinnamyl	H	H	H	F
I-443	4-trifluoromethylcinnamyl	H	H	H	F
I-444	4-trifluoromethoxycinnamyl	H	H	H	F
I-445	4-pentafluoroethoxycinnamyl	H	H	H	F
I-446	4-methoxycinnamyl	H	H	H	F
I-447	4-ethoxycinnamyl	H	H	H	F
I-448	4-cyanocinnamyl	H	H	H	F
I-449	3-(6-chloro-pyridin-3-yl)-allyl	H	H	H	F
I-450	3-(4-chlorophenyl)-but-2-enyl	H	H	H	F
I-451	3-(4-chlorophenyl)-3-fluoro-allyl	H	H	H	F
I-452	3-chloro-4-fluoro-cinnamyl	H	H	H	F
I-453	3,5-dichloro-cinnamyl	H	H	H	F
I-454	5-phenyl-penta-2,4-dienyl	H	H	H	F
I-455	4-isopropoxyloxycarbonylamino-cinnamyl	H	H	H	F
I-456	3-naphthalen-2-yl-allyl	H	H	H	F
I-457	3-(5-trifluoromethyl-pyridin-2-yl)-allyl	H	H	H	F
I-458	3-(5-chloro-pyridin-2-yl)-allyl	H	H	H	F
I-459	3-pyridin-4-yl-allyl	H	H	H	F
I-460	3-(2-Chloro-pyridin-4-yl)-allyl	H	H	H	F
I-461	4-chlorobenzyl	H	H	H	Cl
I-462	Cinnamyl	H	H	H	Cl

I-463	4-chlorocinnamyl	H	H	H	Cl
I-464	4-fluorocinnamyl	H	H	H	Cl
I-465	4-bromocinnamyl	H	H	H	Cl
I-466	4-trifluoromethylcinnamyl	H	H	H	Cl
I-467	4-trifluoromethoxycinnamyl	H	H	H	Cl
I-468	4-pentafluoroethoxycinnamyl	H	H	H	Cl
I-469	4-methoxycinnamyl	H	H	H	Cl
I-470	4-ethoxycinnamyl	H	H	H	Cl
I-471	4-cyanocinnamyl	H	H	H	Cl
I-472	3-(6-chloro-pyridin-3-yl)-allyl	H	H	H	Cl
I-473	3-(4-chlorophenyl)-but-2-enyl	H	H	H	Cl
I-474	3-(4-chlorophenyl)-3-fluoro-allyl	H	H	H	Cl
I-475	3-chloro-4-fluoro-cinnamyl	H	H	H	Cl
I-476	3,5-dichloro-cinnamyl	H	H	H	Cl
I-477	5-phenyl-penta-2,4-dienyl	H	H	H	Cl
I-478	4-isopropyloxycarbonylamino-cinnamyl	H	H	H	Cl
I-479	3-naphthalen-2-yl-allyl	H	H	H	Cl
I-480	3-(5-trifluoromethyl-pyridin-2-yl)-allyl	H	H	H	Cl
I-481	3-(5-chloro-pyridin-2-yl)-allyl	H	H	H	Cl
I-482	3-pyridin-4-yl-allyl	H	H	H	Cl
I-483	3-(2-Chloro-pyridin-4-yl)-allyl	H	H	H	Cl
I-484	4-chlorobenzyl	H	F	F	H
I-485	Cinnamyl	H	F	F	H
I-486	4-chlorocinnamyl	H	F	F	H
I-487	4-fluorocinnamyl	H	F	F	H
I-488	4-bromocinnamyl	H	F	F	H
I-489	4-trifluoromethylcinnamyl	H	F	F	H
I-490	4-trifluoromethoxycinnamyl	H	F	F	H
I-491	4-pentafluoroethoxycinnamyl	H	F	F	H
I-492	4-methoxycinnamyl	H	F	F	H
I-493	4-ethoxycinnamyl	H	F	F	H

I-494	4-cyanocinnamyl	H	F	F	H
I-495	3-(6-chloro-pyridin-3-yl)-allyl	H	F	F	H
I-496	3-(4-chlorophenyl)-but-2-enyl	H	F	F	H
I-497	3-(4-chlorophenyl)-3-fluoro-allyl	H	F	F	H
I-498	3-chloro-4-fluoro-cinnamyl	H	F	F	H
I-499	3,5-dichloro-cinnamyl	H	F	F	H
I-500	5-phenyl-penta-2,4-dienyl	H	F	F	H
I-501	4-isopropoxyloxycarbonylamino-cinnamyl	H	F	F	H
I-502	3-naphthalen-2-yl-allyl	H	F	F	H
I-503	3-(5-trifluoromethyl-pyridin-2-yl)-allyl	H	F	F	H
I-504	3-(5-chloro-pyridin-2-yl)-allyl	H	F	F	H
I-505	3-pyridin-4-yl-allyl	H	F	F	H
I-506	3-(2-Chloro-pyridin-4-yl)-allyl	H	F	F	H
I-507	4-chlorobenzyl	H	F	Cl	H
I-508	Cinnamyl	H	F	Cl	H
I-509	4-chlorocinnamyl	H	F	Cl	H
I-510	4-fluorocinnamyl	H	F	Cl	H
I-511	4-bromocinnamyl	H	F	Cl	H
I-512	4-trifluoromethylcinnamyl	H	F	Cl	H
I-513	4-trifluoromethoxycinnamyl	H	F	Cl	H
I-514	4-pentafluoroethoxycinnamyl	H	F	Cl	H
I-515	4-methoxycinnamyl	H	F	Cl	H
I-516	4-ethoxycinnamyl	H	F	Cl	H
I-517	4-cyanocinnamyl	H	F	Cl	H
I-518	3-(6-chloro-pyridin-3-yl)-allyl	H	F	Cl	H
I-519	3-(4-chlorophenyl)-but-2-enyl	H	F	Cl	H
I-520	3-(4-chlorophenyl)-3-fluoro-allyl	H	F	Cl	H
I-521	3-chloro-4-fluoro-cinnamyl	H	F	Cl	H
I-522	3,5-dichloro-cinnamyl	H	F	Cl	H
I-523	5-phenyl-penta-2,4-dienyl	H	F	Cl	H
I-524	4-isopropoxyloxycarbonylamino-cinnamyl	H	F	Cl	H

I-525	3-naphthalen-2-yl-allyl	H	F	Cl	H
I-526	3-(5-trifluoromethyl-pyridin-2-yl)-allyl	H	F	Cl	H
I-527	3-(5-chloro-pyridin-2-yl)-allyl	H	F	Cl	H
I-528	3-pyridin-4-yl-allyl	H	F	Cl	H
I-529	3-(2-Chloro-pyridin-4-yl)-allyl	H	F	Cl	H
I-530	4-chlorobenzyl	H	Cl	F	H
I-531	Cinnamyl	H	Cl	F	H
I-532	4-chlorocinnamyl	H	Cl	F	H
I-533	4-fluorocinnamyl	H	Cl	F	H
I-534	4-bromocinnamyl	H	Cl	F	H
I-535	4-trifluoromethylcinnamyl	H	Cl	F	H
I-536	4-trifluoromethoxycinnamyl	H	Cl	F	H
I-537	4-pentafluoroethoxycinnamyl	H	Cl	F	H
I-538	4-methoxycinnamyl	H	Cl	F	H
I-539	4-ethoxycinnamyl	H	Cl	F	H
I-540	4-cyanocinnamyl	H	Cl	F	H
I-541	3-(6-chloro-pyridin-3-yl)-allyl	H	Cl	F	H
I-542	3-(4-chlorophenyl)-but-2-enyl	H	Cl	F	H
I-543	3-(4-chlorophenyl)-3-fluoro-allyl	H	Cl	F	H
I-544	3-chloro-4-fluoro-cinnamyl	H	Cl	F	H
I-545	3,5-dichloro-cinnamyl	H	Cl	F	H
I-546	5-phenyl-penta-2,4-dienyl	H	Cl	F	H
I-547	4-isopropyloxycarbonylamino-cinnamyl	H	Cl	F	H
I-548	3-naphthalen-2-yl-allyl	H	Cl	F	H
I-549	3-(5-trifluoromethyl-pyridin-2-yl)-allyl	H	Cl	F	H
I-550	3-(5-chloro-pyridin-2-yl)-allyl	H	Cl	F	H
I-551	3-pyridin-4-yl-allyl	H	Cl	F	H
I-552	3-(2-Chloro-pyridin-4-yl)-allyl	H	Cl	F	H
I-553	4-chlorobenzyl	H	Cl	Cl	H
I-554	Cinnamyl	H	Cl	Cl	H
I-555	4-chlorocinnamyl	H	Cl	Cl	H

I-556	4-fluorocinnamyl	H	Cl	Cl	H
I-557	4-bromocinnamyl	H	Cl	Cl	H
I-558	4-trifluoromethylcinnamyl	H	Cl	Cl	H
I-559	4-trifluoromethoxycinnamyl	H	Cl	Cl	H
I-560	4-pentafluoroethoxycinnamyl	H	Cl	Cl	H
I-561	4-methoxycinnamyl	H	Cl	Cl	H
I-562	4-ethoxycinnamyl	H	Cl	Cl	H
I-563	4-cyanocinnamyl	H	Cl	Cl	H
I-564	3-(6-chloro-pyridin-3-yl)-allyl	H	Cl	Cl	H
I-565	3-(4-chlorophenyl)-but-2-enyl	H	Cl	Cl	H
I-566	3-(4-chlorophenyl)-3-fluoro-allyl	H	Cl	Cl	H
I-567	3-chloro-4-fluoro-cinnamyl	H	Cl	Cl	H
I-568	3,5-dichloro-cinnamyl	H	Cl	Cl	H
I-569	5-phenyl-penta-2,4-dienyl	H	Cl	Cl	H
I-570	4-isopropoxyloxycarbonylamino-cinnamyl	H	Cl	Cl	H
I-571	3-naphthalen-2-yl-allyl	H	Cl	Cl	H
I-572	3-(5-trifluoromethyl-pyridin-2-yl)-allyl	H	Cl	Cl	H
I-573	3-(5-chloro-pyridin-2-yl)-allyl	H	Cl	Cl	H
I-574	3-pyridin-4-yl-allyl	H	Cl	Cl	H
I-575	3-(2-Chloro-pyridin-4-yl)-allyl	H	Cl	Cl	H
I-576	4-chlorobenzyl	H	-OCF ₂ O-		H
I-577	Cinnamyl	H	-OCF ₂ O-		H
I-578	4-chlorocinnamyl	H	-OCF ₂ O-		H
I-579	4-fluorocinnamyl	H	-OCF ₂ O-		H
I-580	4-bromocinnamyl	H	-OCF ₂ O-		H
I-581	4-trifluoromethylcinnamyl	H	-OCF ₂ O-		H
I-582	4-trifluoromethoxycinnamyl	H	-OCF ₂ O-		H
I-583	4-pentafluoroethoxycinnamyl	H	-OCF ₂ O-		H
I-584	4-methoxycinnamyl	H	-OCF ₂ O-		H
I-585	4-ethoxycinnamyl	H	-OCF ₂ O-		H
I-586	4-cyanocinnamyl	H	-OCF ₂ O-		H

I-587	3-(6-chloro-pyridin-3-yl)-allyl	H	-OCF ₂ O-	H
I-588	3-(4-chlorophenyl)-but-2-enyl	H	-OCF ₂ O-	H
I-589	3-(4-chlorophenyl)-3-fluoro-allyl	H	-OCF ₂ O-	H
I-590	3-chloro-4-fluoro-cinnamyl	H	-OCF ₂ O-	H
I-591	3,5-dichloro-cinnamyl	H	-OCF ₂ O-	H
I-592	5-phenyl-penta-2,4-dienyl	H	-OCF ₂ O-	H
I-593	4-isopropoxyloxycarbonylamino-cinnamyl	H	-OCF ₂ O-	H
I-594	3-naphthalen-2-yl-allyl	H	-OCF ₂ O-	H
I-595	3-(5-trifluoromethyl-pyridin-2-yl)-allyl	H	-OCF ₂ O-	H
I-596	3-(5-chloro-pyridin-2-yl)-allyl	H	-OCF ₂ O-	H
I-597	3-pyridin-4-yl-allyl	H	-OCF ₂ O-	H
I-598	3-(2-Chloro-pyridin-4-yl)-allyl	H	-OCF ₂ O-	H
I-599	4-chlorobenzyl	H	-C ₄ H ₄ -	H
I-600	Cinnamyl	H	-C ₄ H ₄ -	H
I-601	4-chlorocinnamyl	H	-C ₄ H ₄ -	H
I-602	4-fluorocinnamyl	H	-C ₄ H ₄ -	H
I-603	4-bromocinnamyl	H	-C ₄ H ₄ -	H
I-604	4-trifluoromethylcinnamyl	H	-C ₄ H ₄ -	H
I-605	4-trifluoromethoxycinnamyl	H	-C ₄ H ₄ -	H
I-606	4-pentafluoroethoxycinnamyl	H	-C ₄ H ₄ -	H
I-607	4-methoxycinnamyl	H	-C ₄ H ₄ -	H
I-608	4-ethoxycinnamyl	H	-C ₄ H ₄ -	H
I-609	4-cyanocinnamyl	H	-C ₄ H ₄ -	H
I-610	3-(6-chloro-pyridin-3-yl)-allyl	H	-C ₄ H ₄ -	H
I-611	3-(4-chlorophenyl)-but-2-enyl	H	-C ₄ H ₄ -	H
I-612	3-(4-chlorophenyl)-3-fluoro-allyl	H	-C ₄ H ₄ -	H
I-613	3-chloro-4-fluoro-cinnamyl	H	-C ₄ H ₄ -	H
I-614	3,5-dichloro-cinnamyl	H	-C ₄ H ₄ -	H
I-615	5-phenyl-penta-2,4-dienyl	H	-C ₄ H ₄ -	H
I-616	4-isopropoxyloxycarbonylamino-cinnamyl	H	-C ₄ H ₄ -	H
I-617	3-naphthalen-2-yl-allyl	H	-C ₄ H ₄ -	H

I-618	3-(5-trifluoromethyl-pyridin-2-yl)-allyl	H	-C ₄ H ₄ -		H
I-619	3-(5-chloro-pyridin-2-yl)-allyl	H	-C ₄ H ₄ -		H
I-620	3-pyridin-4-yl-allyl	H	-C ₄ H ₄ -		H
I-621	3-(2-Chloro-pyridin-4-yl)-allyl	H	-C ₄ H ₄ -		H
I-622	4-chlorobenzyl	Cl	H	Cl	H
I-623	Cinnamyl	Cl	H	Cl	H
I-624	4-chlorocinnamyl	Cl	H	Cl	H
I-625	4-fluorocinnamyl	Cl	H	Cl	H
I-226	4-bromocinnamyl	Cl	H	Cl	H
I-627	4-trifluoromethylcinnamyl	Cl	H	Cl	H
I-628	4-trifluoromethoxycinnamyl	Cl	H	Cl	H
I-629	4-pentafluoroethoxycinnamyl	Cl	H	Cl	H
I-630	4-methoxycinnamyl	Cl	H	Cl	H
I-631	4-ethoxycinnamyl	Cl	H	Cl	H
I-632	4-cyanocinnamyl	Cl	H	Cl	H
I-633	3-(6-chloro-pyridin-3-yl)-allyl	Cl	H	Cl	H
I-634	3-(4-chlorophenyl)-but-2-enyl	Cl	H	Cl	H
I-635	3-(4-chlorophenyl)-3-fluoro-allyl	Cl	H	Cl	H
I-636	3-chloro-4-fluoro-cinnamyl	Cl	H	Cl	H
I-637	3,5-dichloro-cinnamyl	Cl	H	Cl	H
I-638	5-phenyl-penta-2,4-dienyl	Cl	H	Cl	H
I-639	4-isopropyloxycarbonylamino-cinnamyl	Cl	H	Cl	H
I-640	3-naphthalen-2-yl-allyl	Cl	H	Cl	H
I-641	3-(5-trifluoromethyl-pyridin-2-yl)-allyl	Cl	H	Cl	H
I-642	3-(5-chloro-pyridin-2-yl)-allyl	Cl	H	Cl	H
I-643	3-pyridin-4-yl-allyl	Cl	H	Cl	H
I-644	3-(2-Chloro-pyridin-4-yl)-allyl	Cl	H	Cl	H
I-645	4-chlorobenzyl	Cl	Cl	H	H
I-646	Cinnamyl	Cl	Cl	H	H
I-647	4-chlorocinnamyl	Cl	Cl	H	H
I-648	4-fluorocinnamyl	Cl	Cl	H	H

I-649	4-bromocinnamyl	Cl	Cl	H	H
I-650	4-trifluoromethylcinnamyl	Cl	Cl	H	H
I-651	4-trifluoromethoxycinnamyl	Cl	Cl	H	H
I-652	4-pentafluoroethoxycinnamyl	Cl	Cl	H	H
I-653	4-methoxycinnamyl	Cl	Cl	H	H
I-654	4-ethoxycinnamyl	Cl	Cl	H	H
I-655	4-cyanocinnamyl	Cl	Cl	H	H
I-656	3-(6-chloro-pyridin-3-yl)-allyl	Cl	Cl	H	H
I-657	3-(4-chlorophenyl)-but-2-enyl	Cl	Cl	H	H
I-658	3-(4-chlorophenyl)-3-fluoro-allyl	Cl	Cl	H	H
I-659	3-chloro-4-fluoro-cinnamyl	Cl	Cl	H	H
I-660	3,5-dichloro-cinnamyl	Cl	Cl	H	H
I-661	5-phenyl-penta-2,4-dienyl	Cl	Cl	H	H
I-662	4-isopropoxyloxycarbonylamino-cinnamyl	Cl	Cl	H	H
I-663	3-naphthalen-2-yl-allyl	Cl	Cl	H	H
I-664	3-(5-trifluoromethyl-pyridin-2-yl)-allyl	Cl	Cl	H	H
I-665	3-(5-chloro-pyridin-2-yl)-allyl	Cl	Cl	H	H
I-666	3-pyridin-4-yl-allyl	Cl	Cl	H	H
I-667	3-(2-Chloro-pyridin-4-yl)-allyl	Cl	Cl	H	H
I-668	4-chlorobenzyl	H	Cl	H	Cl
I-669	Cinnamyl	H	Cl	H	Cl
I-670	4-chlorocinnamyl	H	Cl	H	Cl
I-671	4-fluorocinnamyl	H	Cl	H	Cl
I-672	4-bromocinnamyl	H	Cl	H	Cl
I-673	4-trifluoromethylcinnamyl	H	Cl	H	Cl
I-674	4-trifluoromethoxycinnamyl	H	Cl	H	Cl
I-675	4-pentafluoroethoxycinnamyl	H	Cl	H	Cl
I-676	4-methoxycinnamyl	H	Cl	H	Cl
I-677	4-ethoxycinnamyl	H	Cl	H	Cl
I-678	4-cyanocinnamyl	H	Cl	H	Cl
I-679	3-(6-chloro-pyridin-3-yl)-allyl	H	Cl	H	Cl

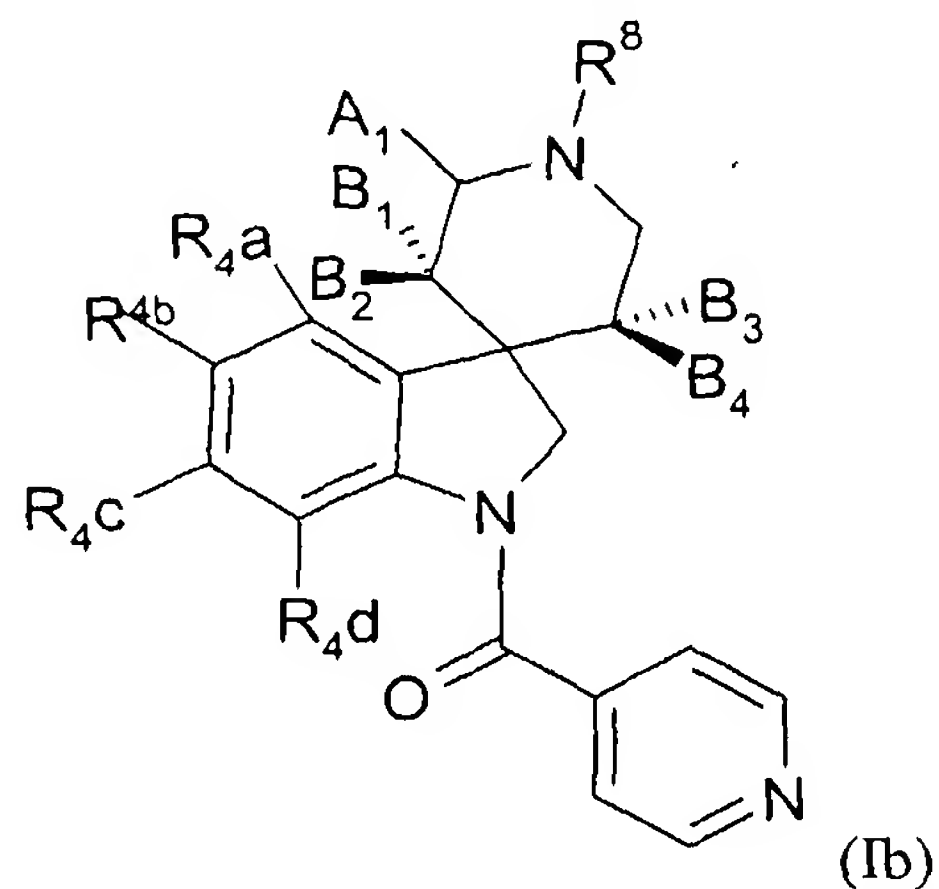
I-680	3-(4-chlorophenyl)-but-2-enyl	H	Cl	H	Cl
I-681	3-(4-chlorophenyl)-3-fluoro-allyl	H	Cl	H	Cl
I-682	3-chloro-4-fluoro-cinnamyl	H	Cl	H	Cl
I-683	3,5-dichloro-cinnamyl	H	Cl	H	Cl
I-684	5-phenyl-penta-2,4-dienyl	H	Cl	H	Cl
I-685	4-isopropyloxycarbonylamino-cinnamyl	H	Cl	H	Cl
I-686	3-naphthalen-2-yl-allyl	H	Cl	H	Cl
I-687	3-(5-trifluoromethyl-pyridin-2-yl)-allyl	H	Cl	H	Cl
I-688	3-(5-chloro-pyridin-2-yl)-allyl	H	Cl	H	Cl
I-689	3-pyridin-4-yl-allyl	H	Cl	H	Cl
I-690	3-(2-Chloro-pyridin-4-yl)-allyl	H	Cl	H	Cl
I-691	4-chlorobenzyl	H	F	H	F
I-692	Cinnamyl	H	F	H	F
I-693	4-chlorocinnamyl	H	F	H	F
I-694	4-fluorocinnamyl	H	F	H	F
I-695	4-bromocinnamyl	H	F	H	F
I-696	4-trifluoromethylcinnamyl	H	F	H	F
I-697	4-trifluoromethoxycinnamyl	H	F	H	F
I-698	4-pentafluoroethoxycinnamyl	H	F	H	F
I-699	4-methoxycinnamyl	H	F	H	F
I-700	4-ethoxycinnamyl	H	F	H	F
I-701	4-cyanocinnamyl	H	F	H	F
I-702	3-(6-chloro-pyridin-3-yl)-allyl	H	F	H	F
I-703	3-(4-chlorophenyl)-but-2-enyl	H	F	H	F
I-704	3-(4-chlorophenyl)-3-fluoro-allyl	H	F	H	F
I-705	3-chloro-4-fluoro-cinnamyl	H	F	H	F
I-706	3,5-dichloro-cinnamyl	H	F	H	F
I-707	5-phenyl-penta-2,4-dienyl	H	F	H	F
I-708	4-isopropyloxycarbonylamino-cinnamyl	H	F	H	F
I-709	3-naphthalen-2-yl-allyl	H	F	H	F
I-710	3-(5-trifluoromethyl-pyridin-2-yl)-allyl	H	F	H	F

I-711	3-(5-chloro-pyridin-2-yl)-allyl	H	F	H	F
I-712	3-pyridin-4-yl-allyl	H	F	H	F
I-713	3-(2-Chloro-pyridin-4-yl)-allyl	H	F	H	F
I-714	4-chlorobenzyl	F	H	F	H
I-715	Cinnamyl	F	H	F	H
I-716	4-chlorocinnamyl	F	H	F	H
I-717	4-fluorocinnamyl	F	H	F	H
I-718	4-bromocinnamyl	F	H	F	H
I-719	4-trifluoromethylcinnamyl	F	H	F	H
I-720	4-trifluoromethoxycinnamyl	F	H	F	H
I-721	4-pentafluoroethoxycinnamyl	F	H	F	H
I-722	4-methoxycinnamyl	F	H	F	H
I-723	4-ethoxycinnamyl	F	H	F	H
I-724	4-cyanocinnamyl	F	H	F	H
I-725	3-(6-chloro-pyridin-3-yl)-allyl	F	H	F	H
I-726	3-(4-chlorophenyl)-but-2-enyl	F	H	F	H
I-727	3-(4-chlorophenyl)-3-fluoro-allyl	F	H	F	H
I-728	3-chloro-4-fluoro-cinnamyl	F	H	F	H
I-729	3,5-dichloro-cinnamyl	F	H	F	H
I-730	5-phenyl-penta-2,4-dienyl	F	H	F	H
I-731	4-isopropyloxycarbonylamino-cinnamyl	F	H	F	H
I-732	3-naphthalen-2-yl-allyl	F	H	F	H
I-733	3-(5-trifluoromethyl-pyridin-2-yl)-allyl	F	H	F	H
I-734	3-(5-chloro-pyridin-2-yl)-allyl	F	H	F	H
I-735	3-pyridin-4-yl-allyl	F	H	F	H
I-736	3-(2-Chloro-pyridin-4-yl)-allyl	F	H	F	H
I-737	4-chlorobenzyl	F	F	H	H
I-738	Cinnamyl	F	F	H	H
I-739	4-chlorocinnamyl	F	F	H	H
I-740	4-fluorocinnamyl	F	F	H	H
I-741	4-bromocinnamyl	F	F	H	H

I-742	4-trifluoromethylcinnamyl	F	F	H	H
I-743	4-trifluoromethoxycinnamyl	F	F	H	H
I-744	4-pentafluoroethoxycinnamyl	F	F	H	H
I-745	4-methoxycinnamyl	F	F	H	H
I-746	4-ethoxycinnamyl	F	F	H	H
I-747	4-cyanocinnamyl	F	F	H	H
I-748	3-(6-chloro-pyridin-3-yl)-allyl	F	F	H	H
I-749	3-(4-chlorophenyl)-but-2-enyl	F	F	H	H
I-750	3-(4-chlorophenyl)-3-fluoro-allyl	F	F	H	H
I-751	3-chloro-4-fluoro-cinnamyl	F	F	H	H
I-752	3,5-dichloro-cinnamyl	F	F	H	H
I-753	5-phenyl-penta-2,4-dienyl	F	F	H	H
I-754	4-isopropyloxycarbonylamino-cinnamyl	F	F	H	H
I-755	3-naphthalen-2-yl-allyl	F	F	H	H
I-756	3-(5-trifluoromethyl-pyridin-2-yl)-allyl	F	F	H	H
I-757	3-(5-chloro-pyridin-2-yl)-allyl	F	F	H	H
I-758	3-pyridin-4-yl-allyl	F	F	H	H
I-759	3-(2-Chloro-pyridin-4-yl)-allyl	F	F	H	H
I-760	4-chlorobenzyl	Cl	F	H	H
I-761	Cinnamyl	Cl	F	H	H
I-762	4-chlorocinnamyl	Cl	F	H	H
I-763	4-fluorocinnamyl	Cl	F	H	H
I-764	4-bromocinnamyl	Cl	F	H	H
I-765	4-trifluoromethylcinnamyl	Cl	F	H	H
I-766	4-trifluoromethoxycinnamyl	Cl	F	H	H
I-767	4-pentafluoroethoxycinnamyl	Cl	F	H	H
I-768	4-methoxycinnamyl	Cl	F	H	H
I-769	4-ethoxycinnamyl	Cl	F	H	H
I-770	4-cyanocinnamyl	Cl	F	H	H
I-771	3-(6-chloro-pyridin-3-yl)-allyl	Cl	F	H	H
I-772	3-(4-chlorophenyl)-but-2-enyl	Cl	F	H	H

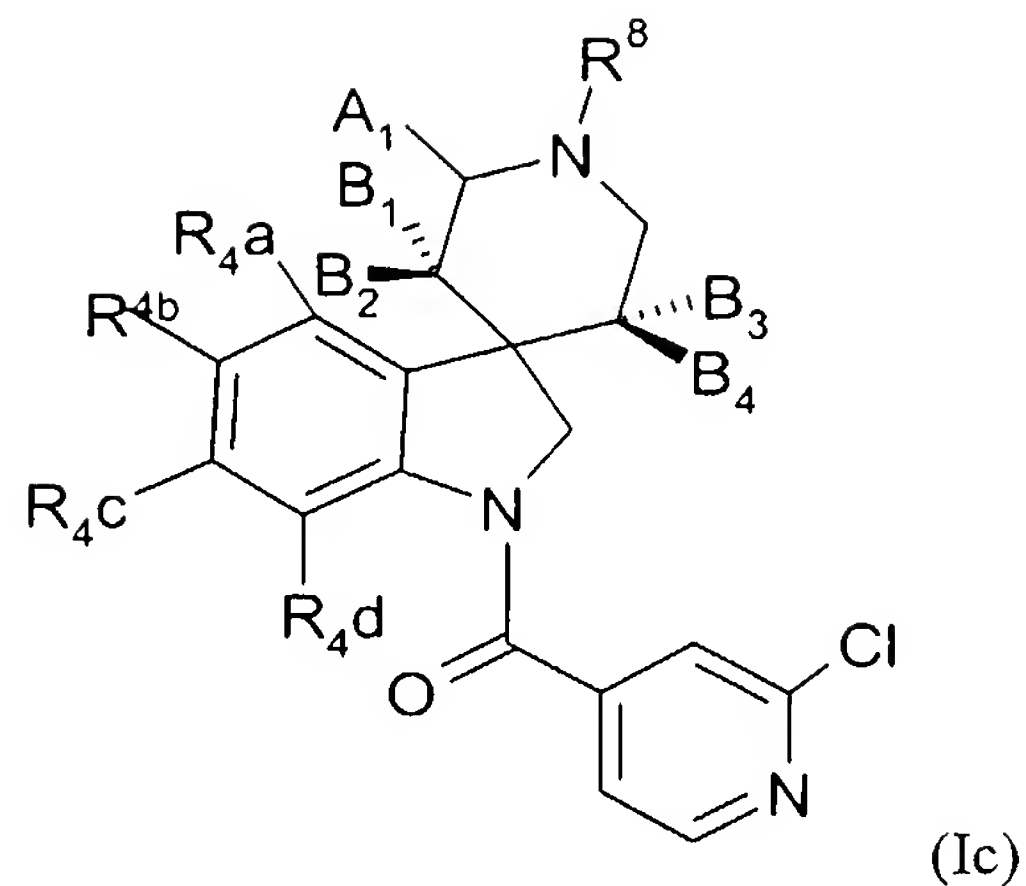
I-773	3-(4-chlorophenyl)-3-fluoro-allyl	Cl	F	H	H
I-774	3-chloro-4-fluoro-cinnamyl	Cl	F	H	H
I-775	3,5-dichloro-cinnamyl	Cl	F	H	H
I-776	5-phenyl-penta-2,4-dienyl	Cl	F	H	H
I-777	4-isopropoxyloxycarbonylamino-cinnamyl	Cl	F	H	H
I-778	3-naphthalen-2-yl-allyl	Cl	F	H	H
I-779	3-(5-trifluoromethyl-pyridin-2-yl)-allyl	Cl	F	H	H
I-780	3-(5-chloro-pyridin-2-yl)-allyl	Cl	F	H	H
I-781	3-pyridin-4-yl-allyl	Cl	F	H	H
I-782	3-(2-Chloro-pyridin-4-yl)-allyl	Cl	F	H	H

Table II provides 782 compounds of formula Ib



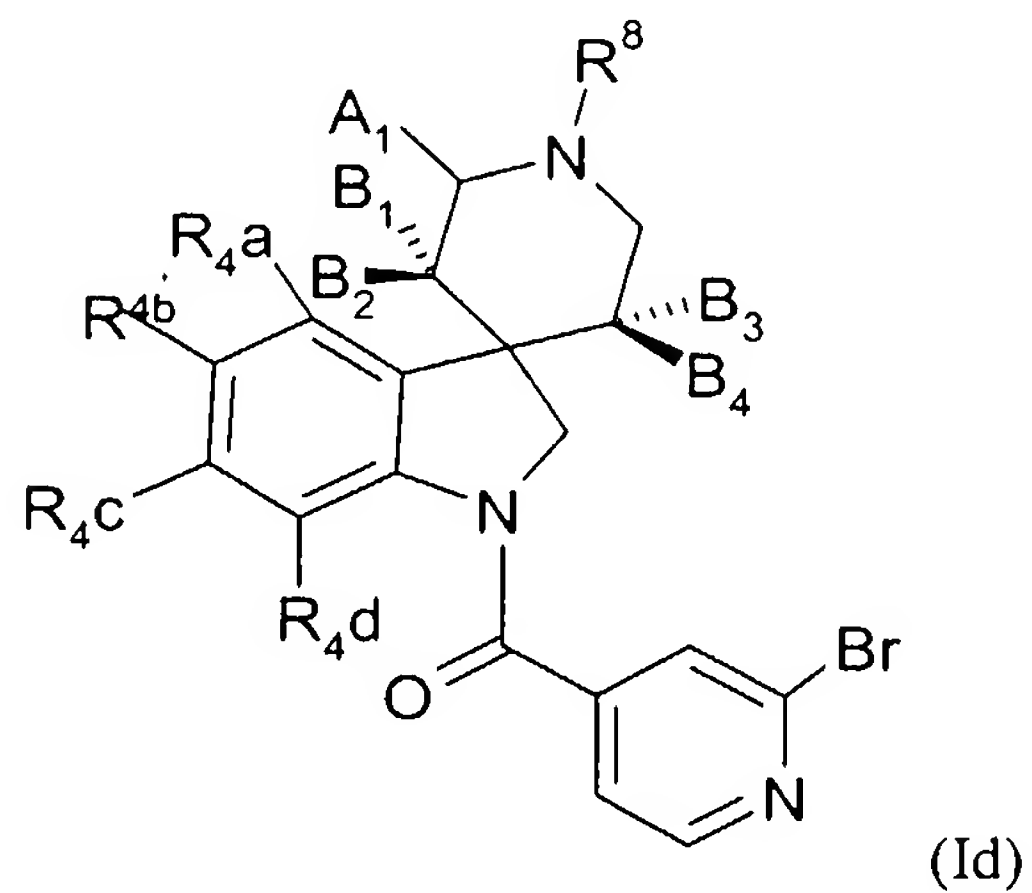
- 5 wherein A₁ is hydrogen, B₁ is CH₃, B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table III provides 782 compounds of formula Ic



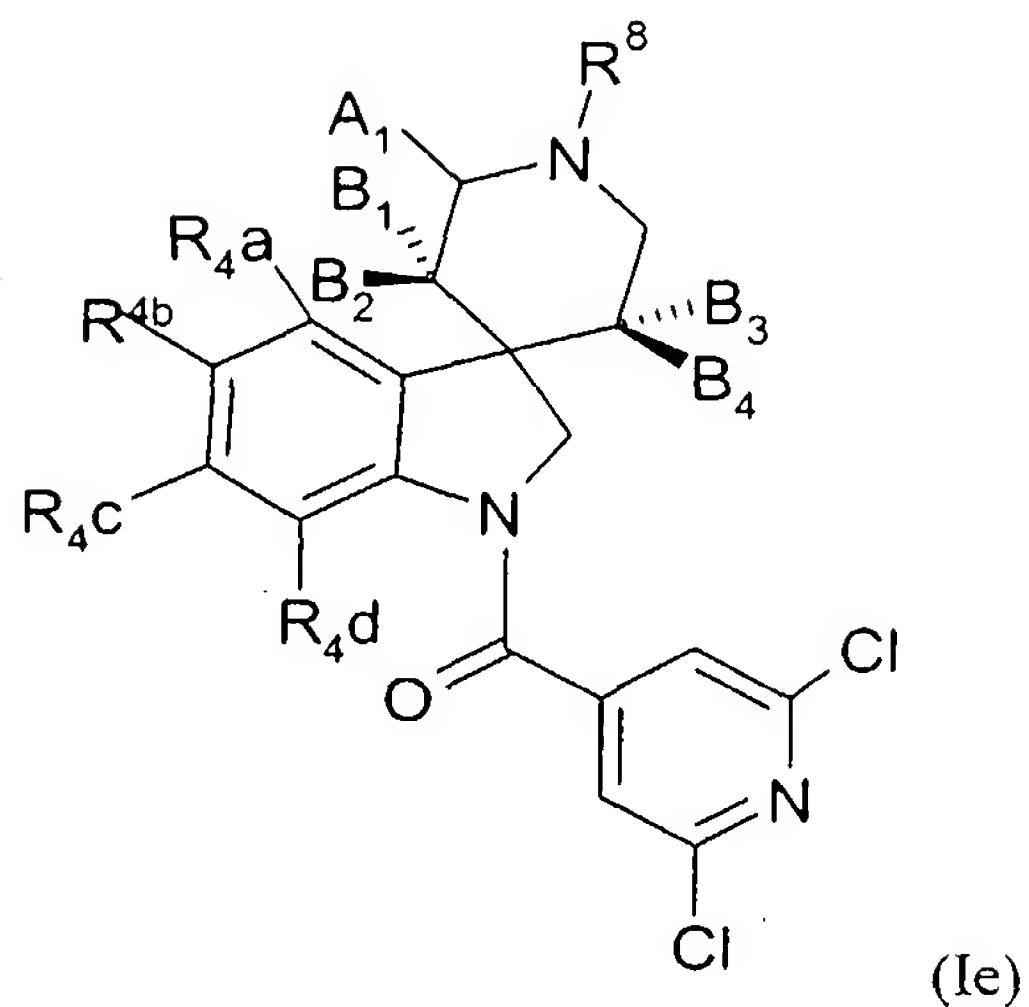
wherein A_1 is hydrogen, B_1 is CH_3 , B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

5 Table IV provides 782 compounds of formula Id



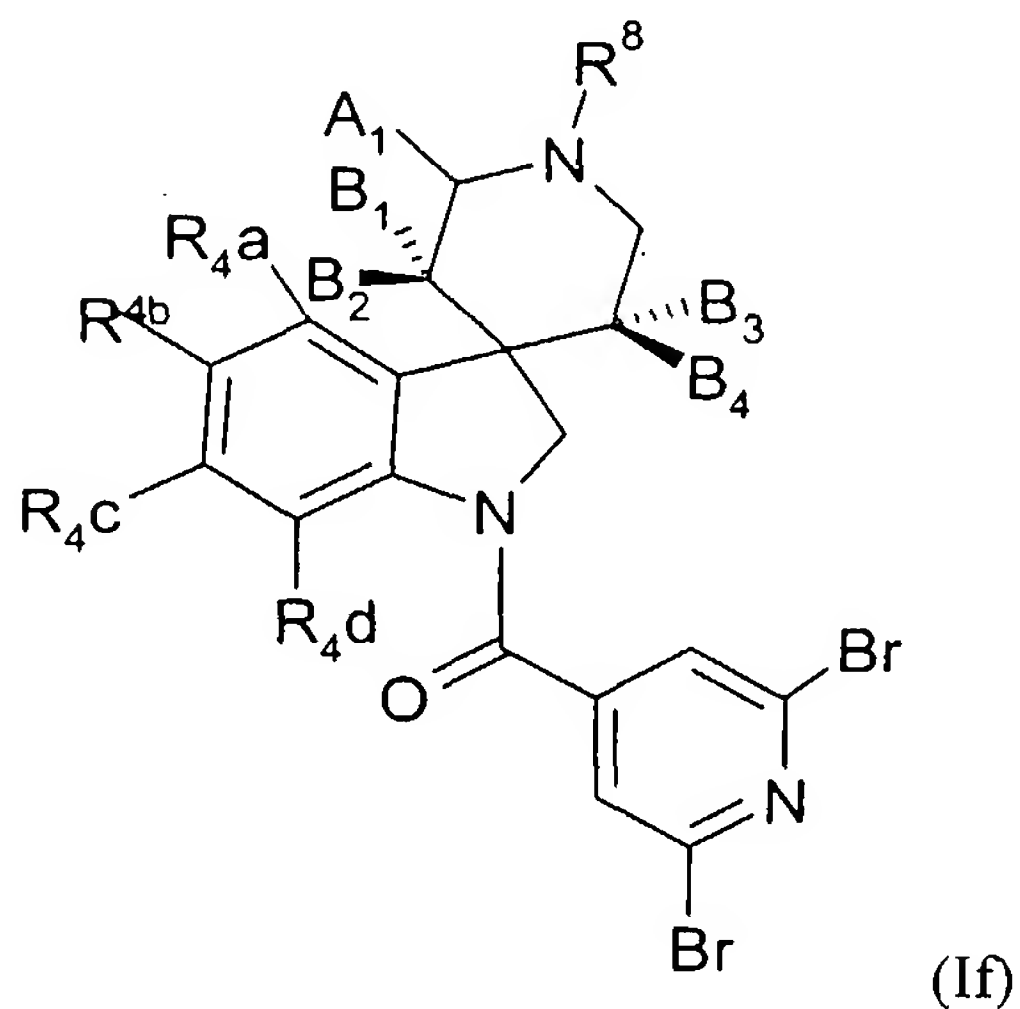
wherein A_1 is hydrogen, B_1 is CH_3 , B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

10 Table V provides 782 compounds of formula Ie



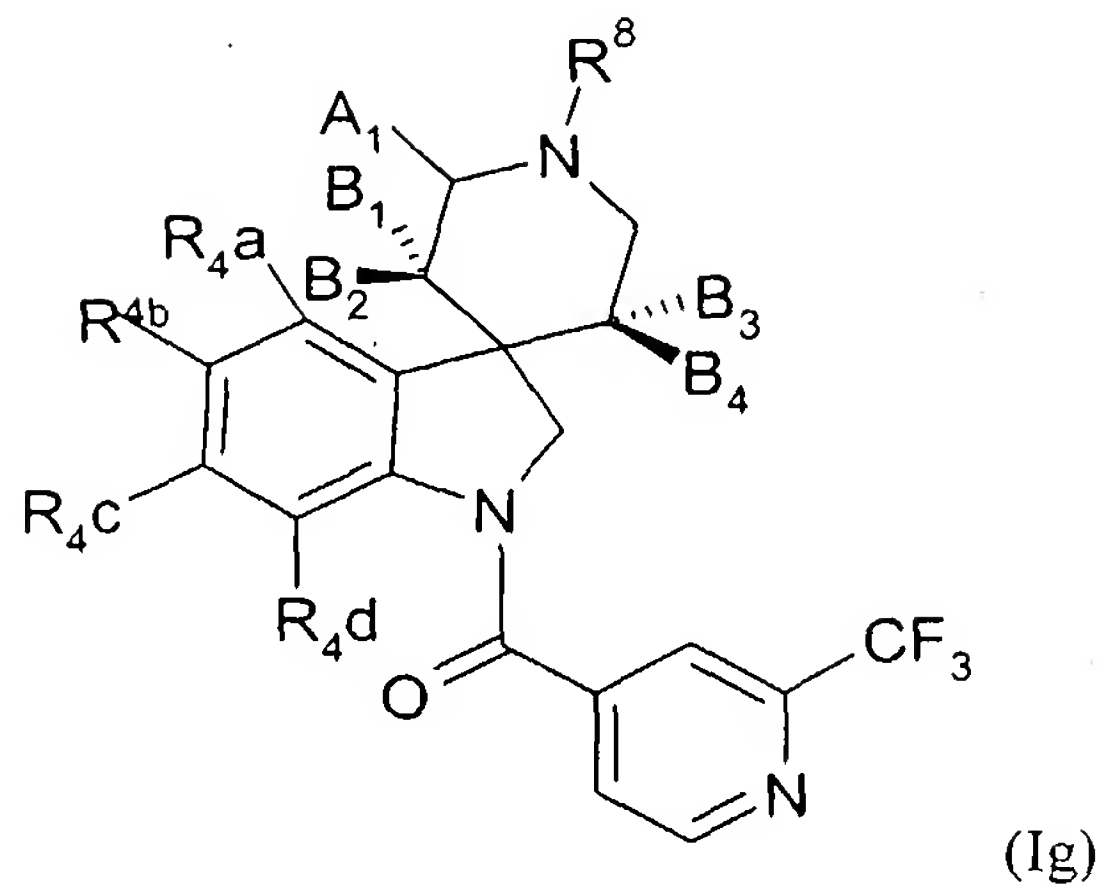
wherein A_1 is hydrogen, B_1 is CH_3 , B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

5 Table VI provides 782 compounds of formula If



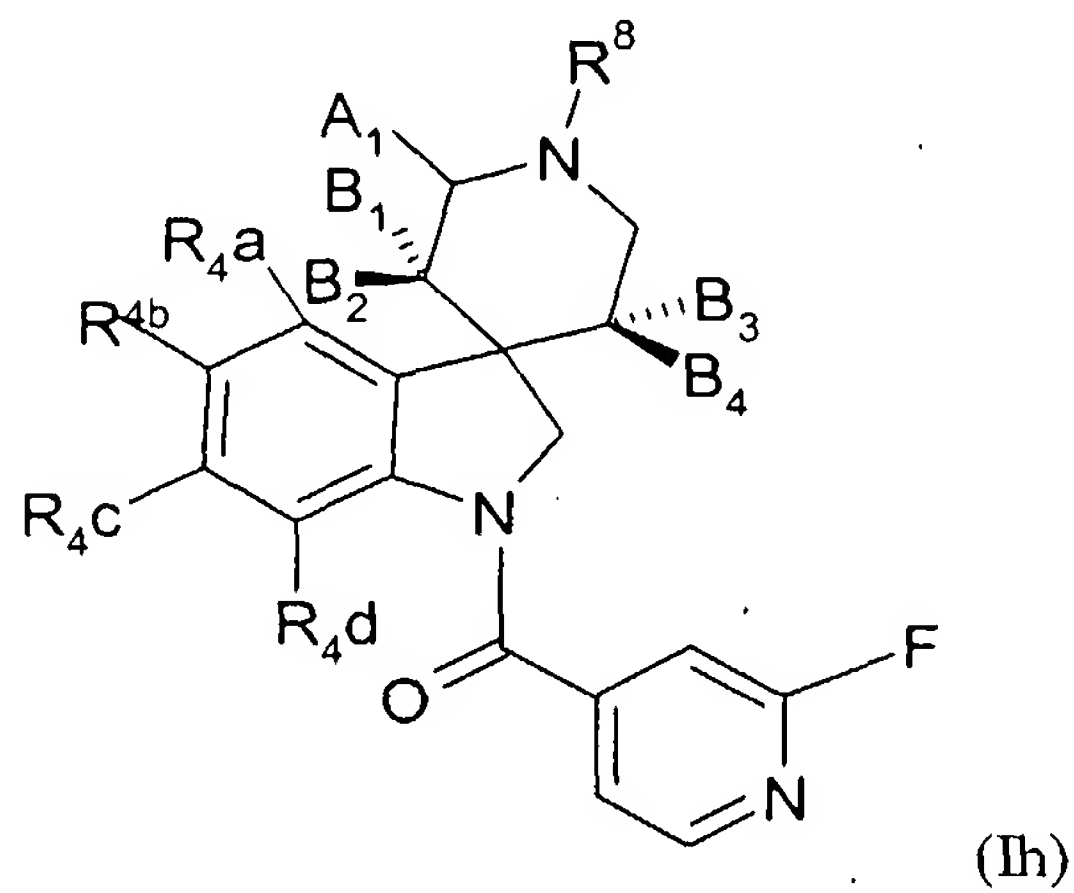
wherein A_1 is hydrogen, B_1 is CH_3 , B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

10 Table VII provides 782 compounds of formula Ig



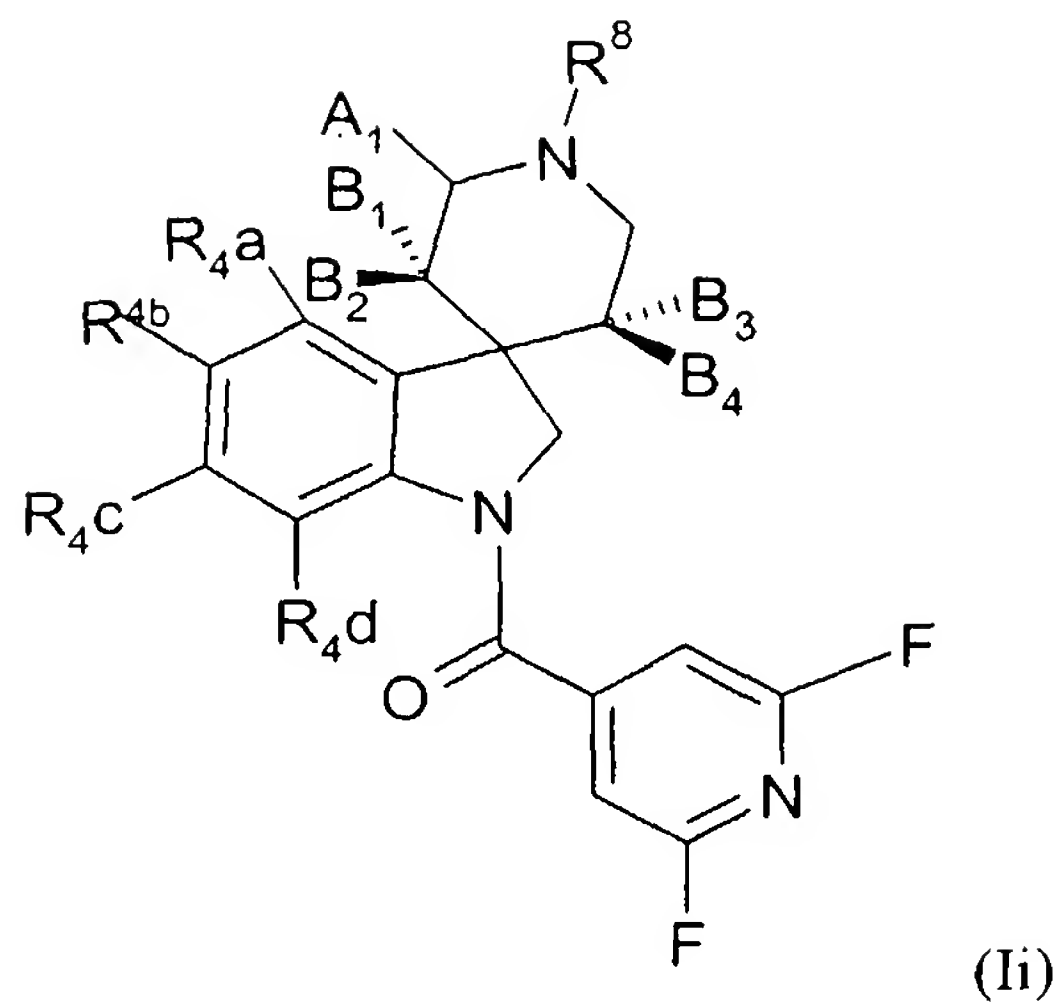
wherein A_1 is hydrogen, B_1 is CH_3 , B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

5 Table VIII provides 782 compounds of formula Ih



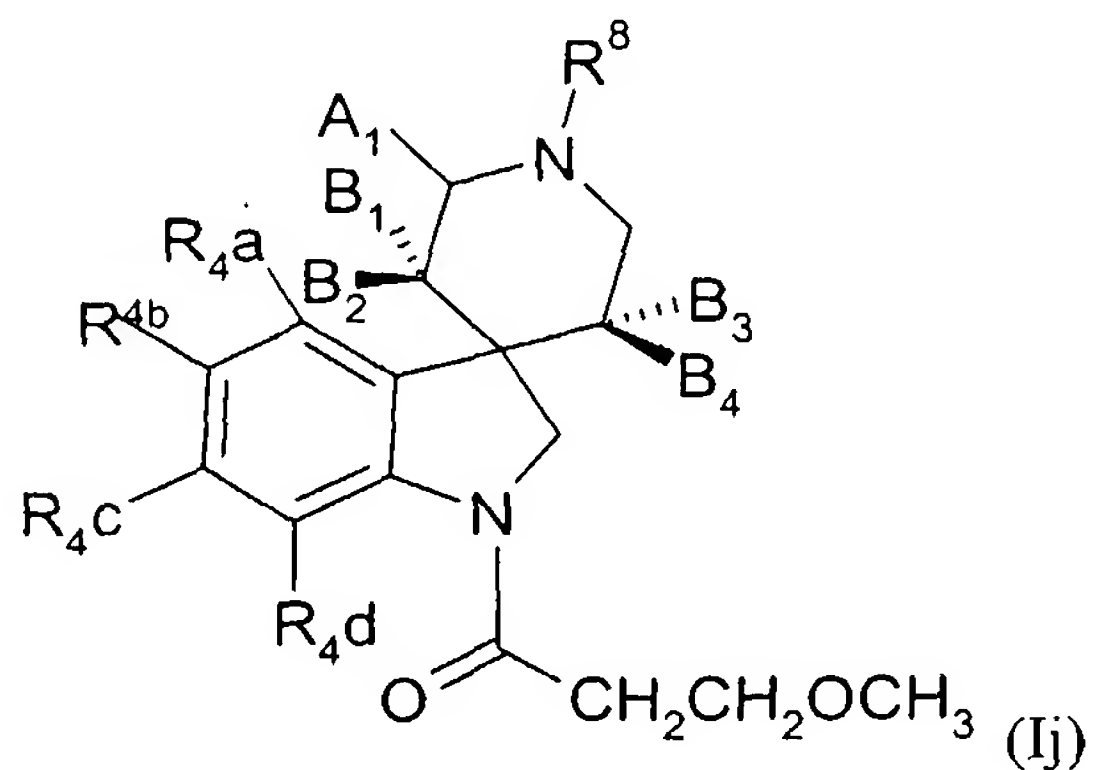
wherein A_1 is hydrogen, B_1 is CH_3 , B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

10 Table IX provides 782 compounds of formula Ii



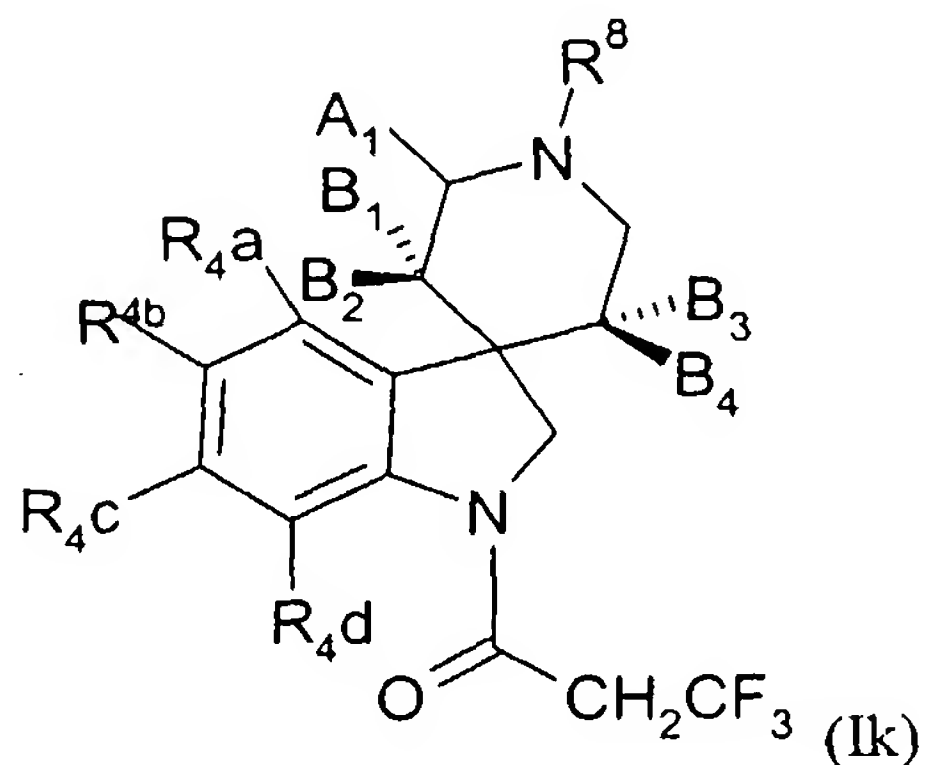
wherein A_1 is hydrogen, B_1 is CH_3 , B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

5 Table X provides 782 compounds of formula Ij



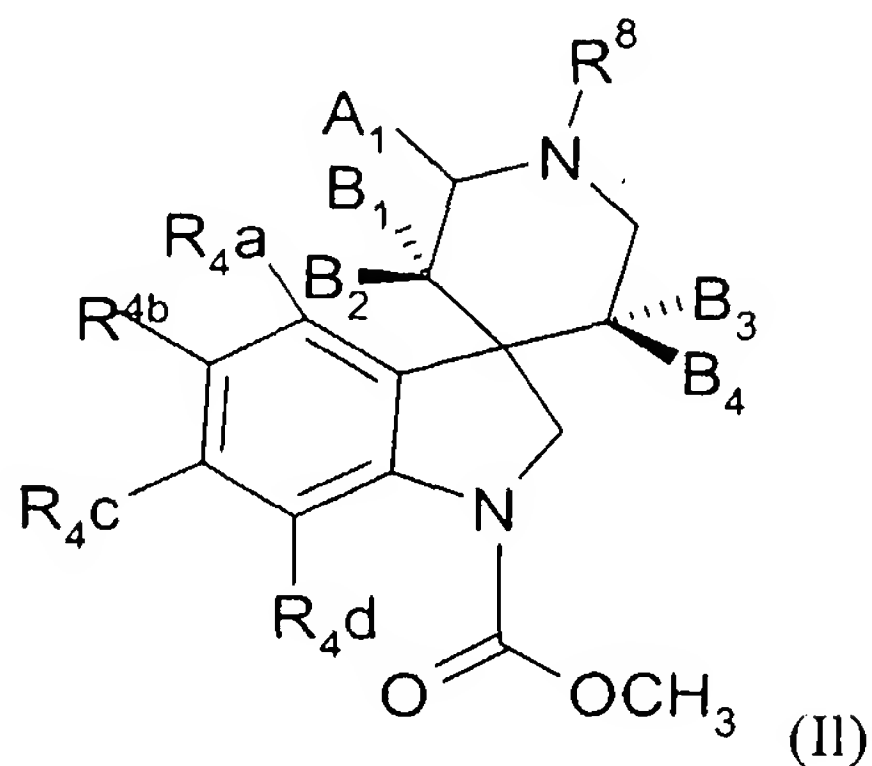
wherein A_1 is hydrogen, B_1 is CH_3 , B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

10 Table XI provides 782 compounds of formula Ik



wherein A_1 is hydrogen, B_1 is CH_3 , B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

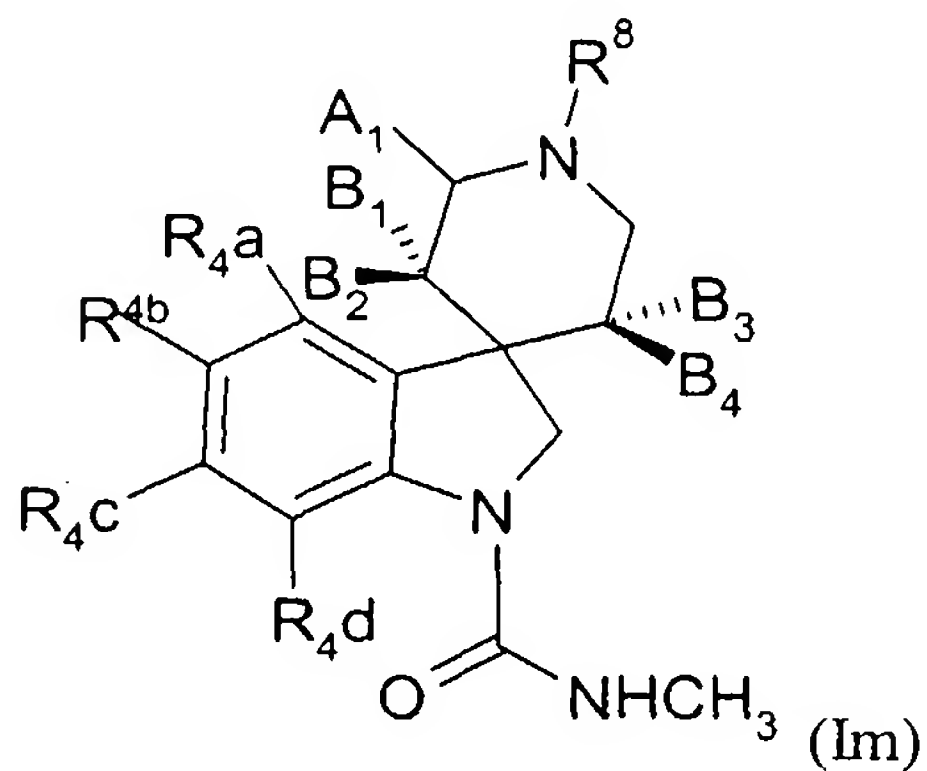
Table XII provides 782 compounds of formula II



5

wherein A_1 is hydrogen, B_1 is CH_3 , B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

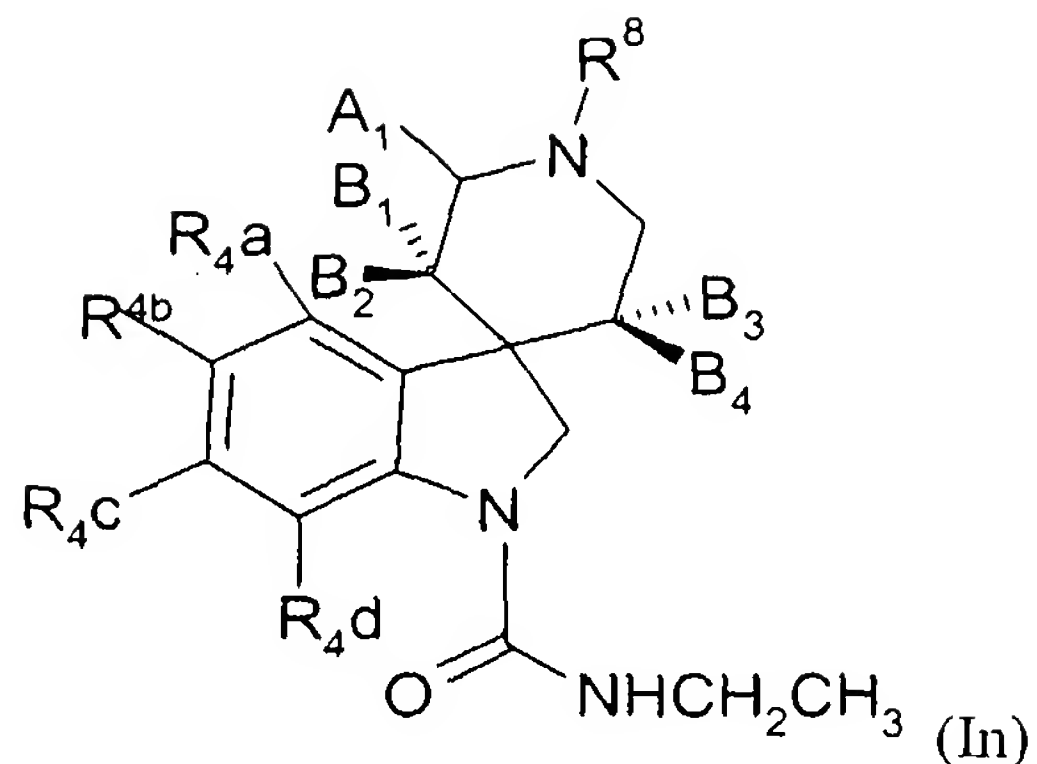
Table XIII provides 782 compounds of formula Im



10

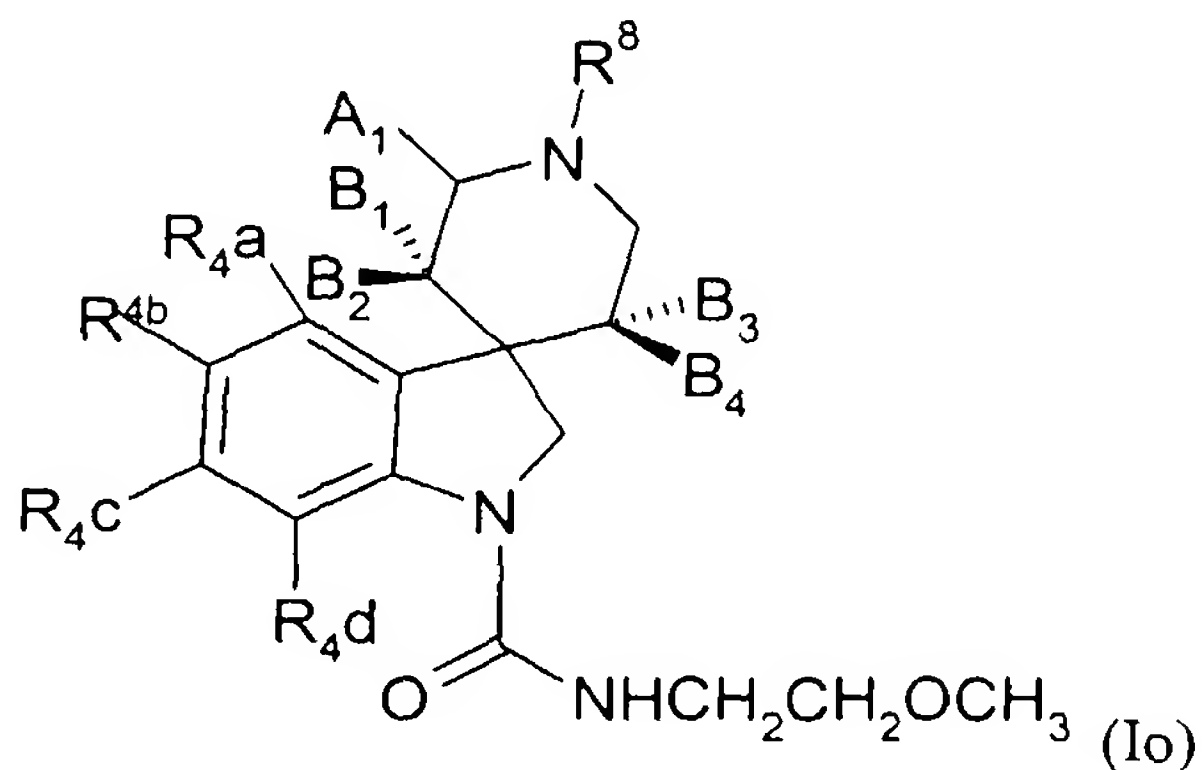
wherein A_1 is hydrogen, B_1 is CH_3 , B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table XIV provides 782 compounds of formula In



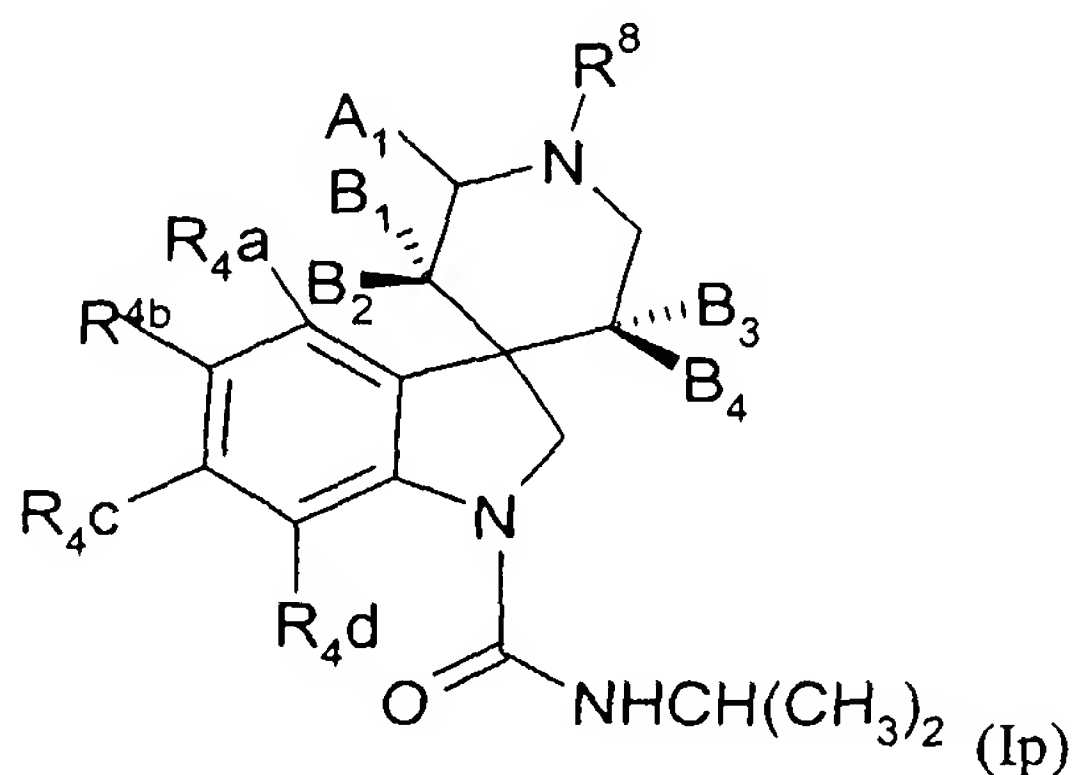
wherein A_1 is hydrogen, B_1 is CH_3 , B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

5 Table XV provides 782 compounds of formula Io



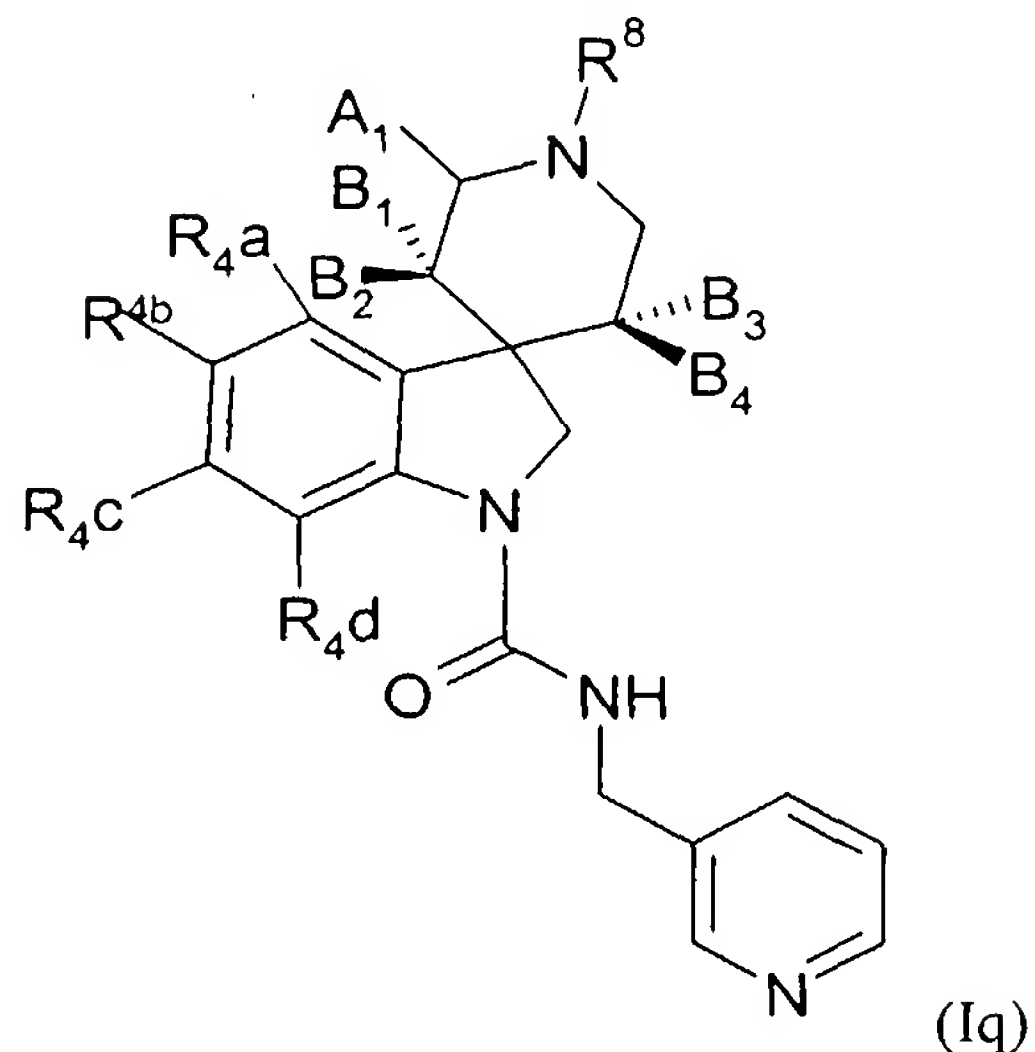
wherein A_1 is hydrogen, B_1 is CH_3 , B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

10 Table XVI provides 782 compounds of formula Ip



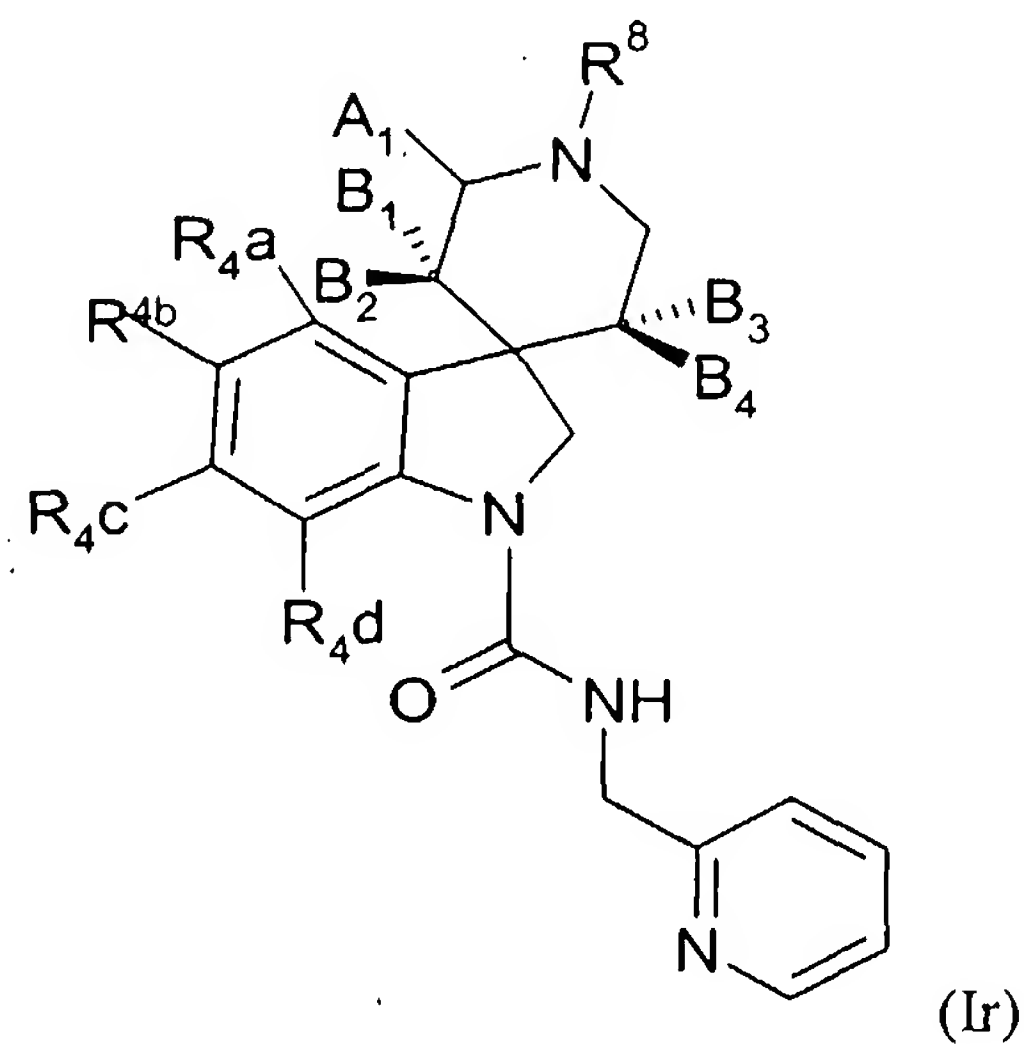
wherein A_1 is hydrogen, B_1 is CH_3 , B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table XVII provides 782 compounds of formula Iq



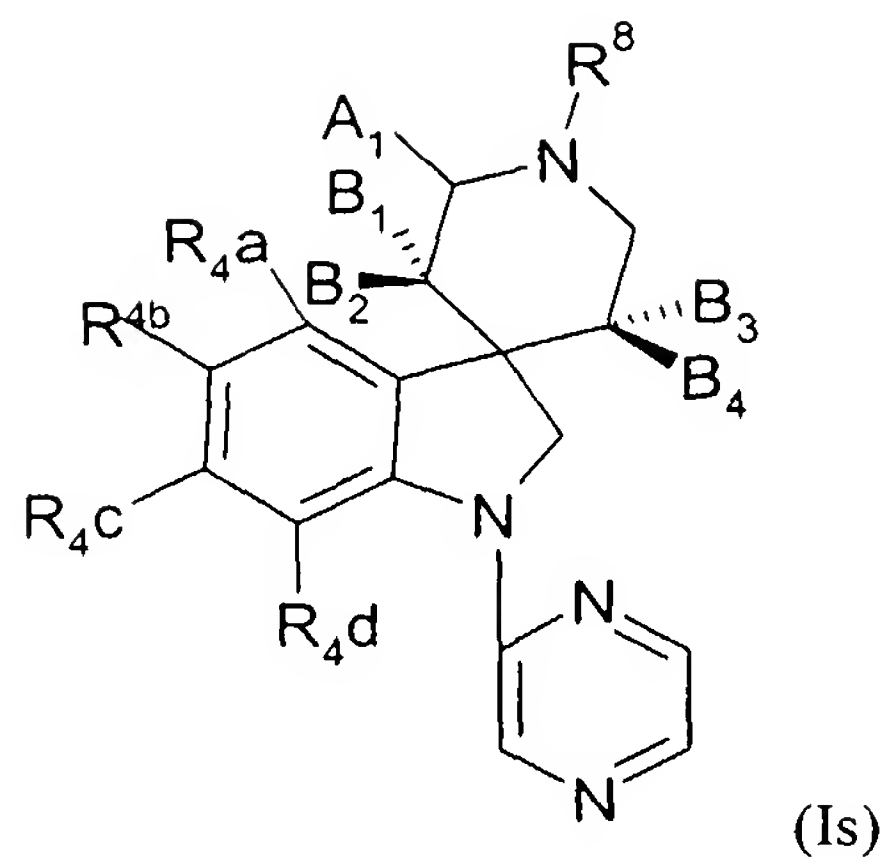
wherein A₁ is hydrogen, B₁ is CH₃, B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b},
5 R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table XVIII provides 782 compounds of formula Ir



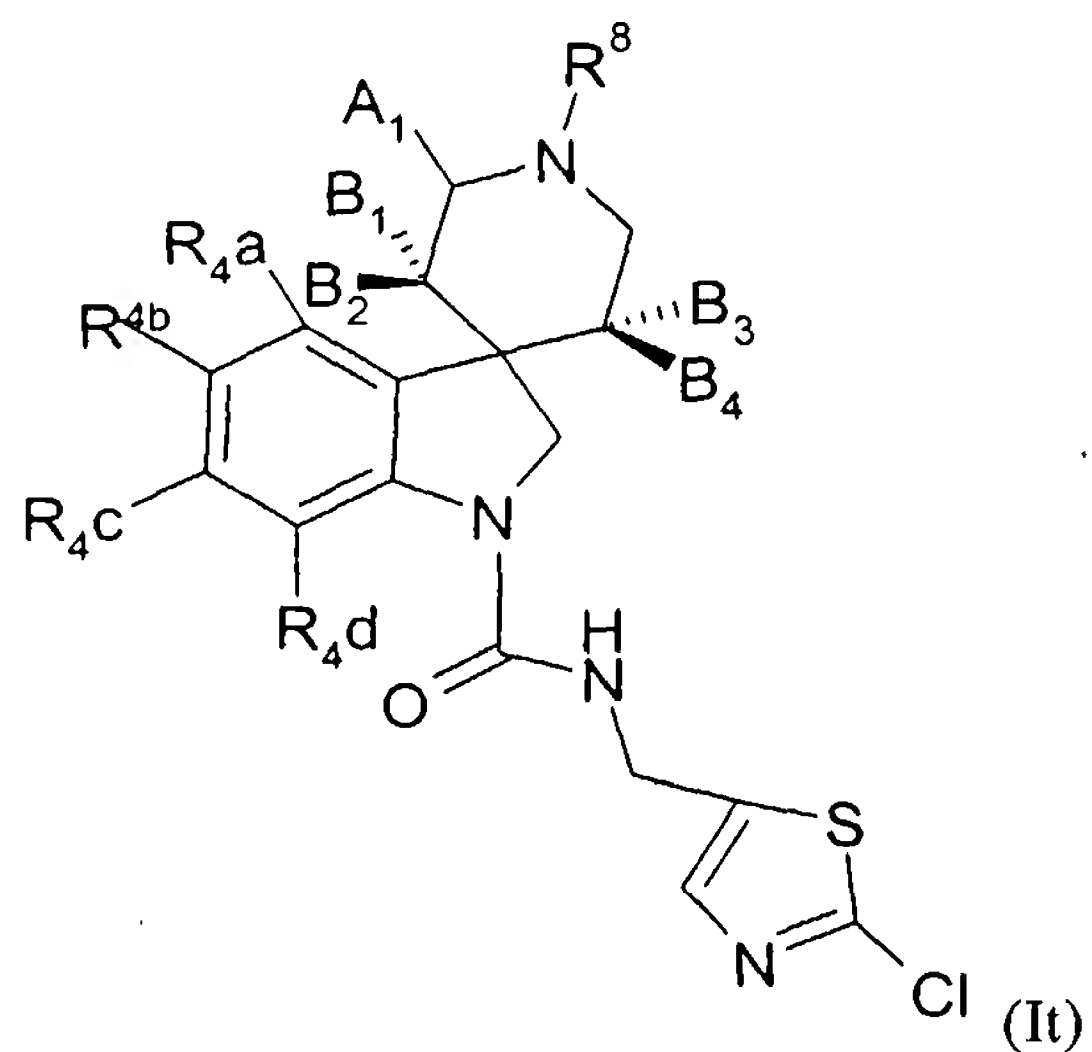
wherein A₁ is hydrogen, B₁ is CH₃, B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b},
10 R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table XIX provides 782 compounds of formula Is



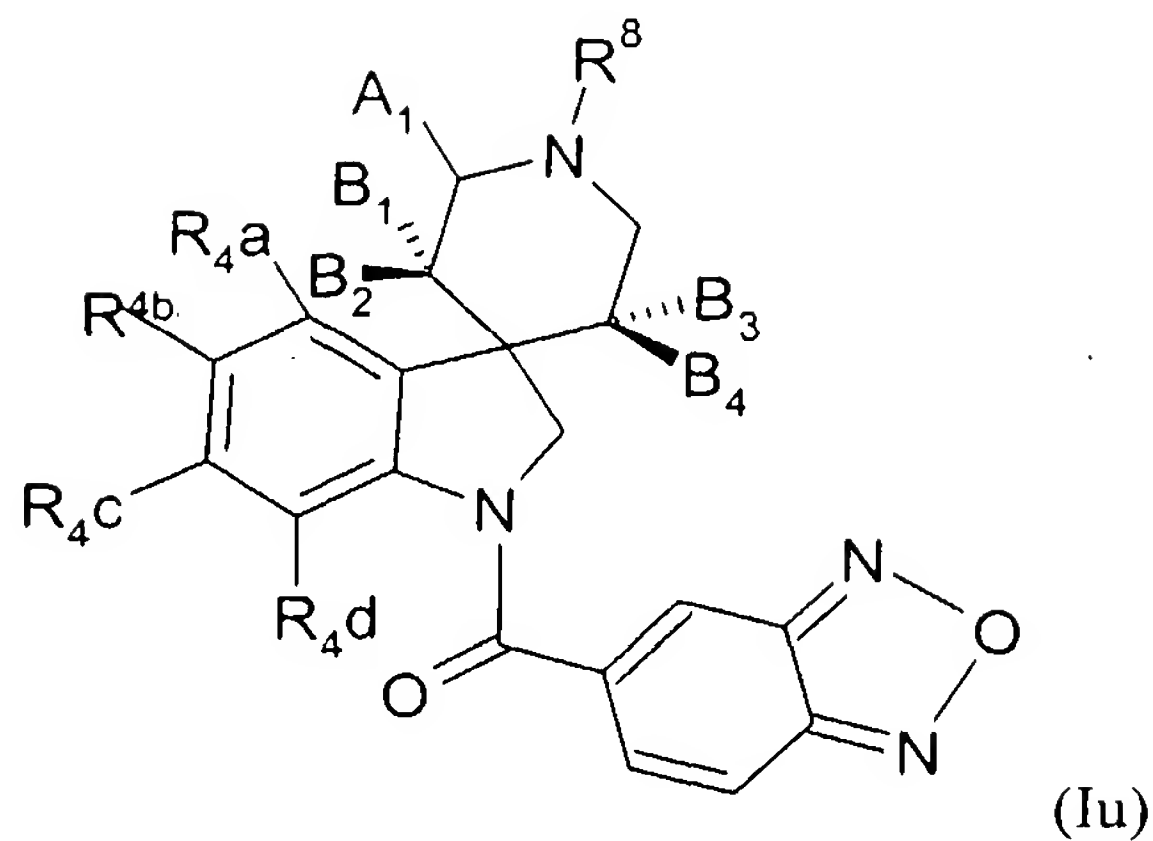
wherein A_1 is hydrogen, B_1 is CH_3 , B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

5 Table XX provides 782 compounds of formula It



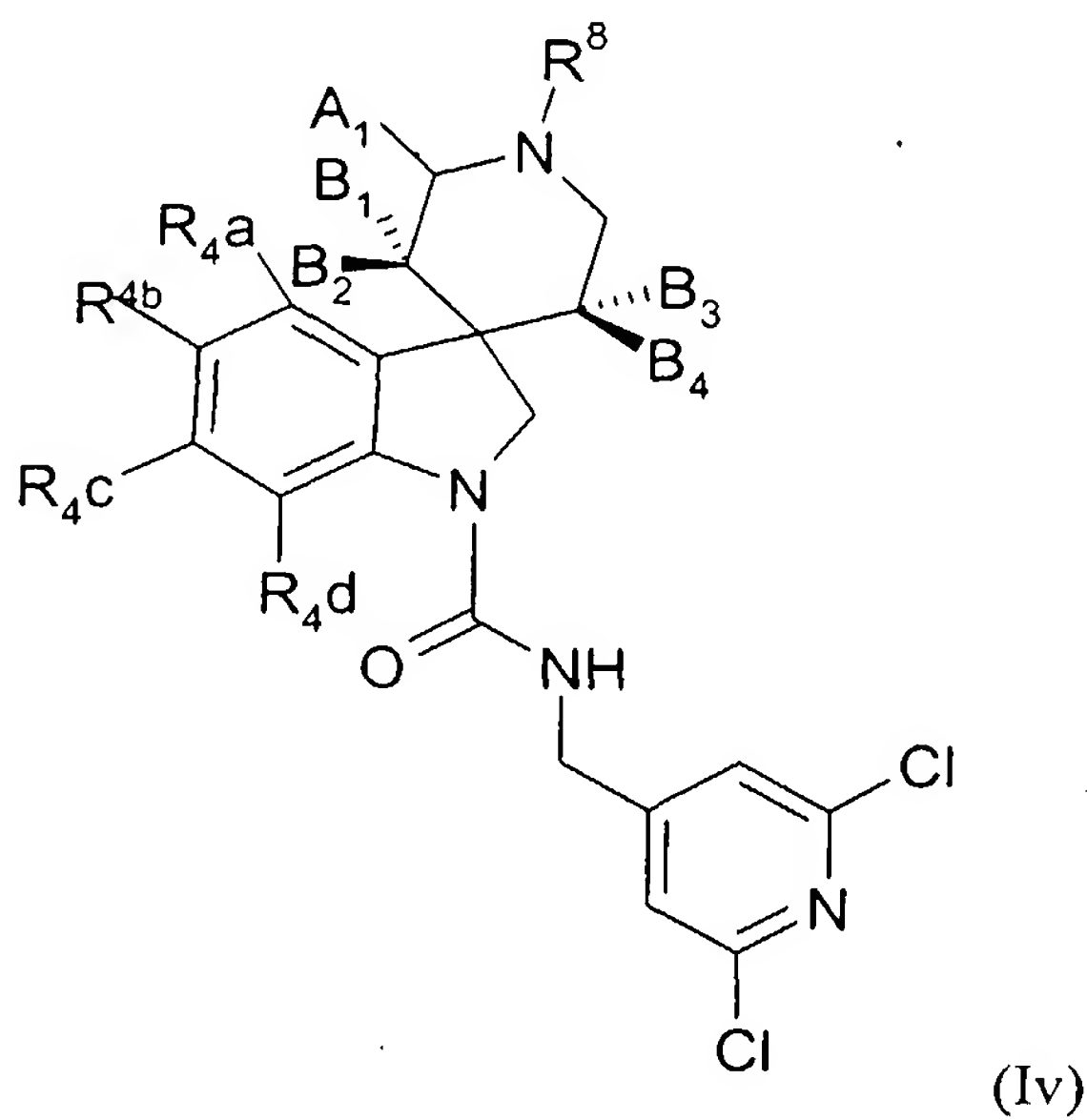
wherein A_1 is hydrogen, B_1 is CH_3 , B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

10 Table XXI provides 782 compounds of formula Iu



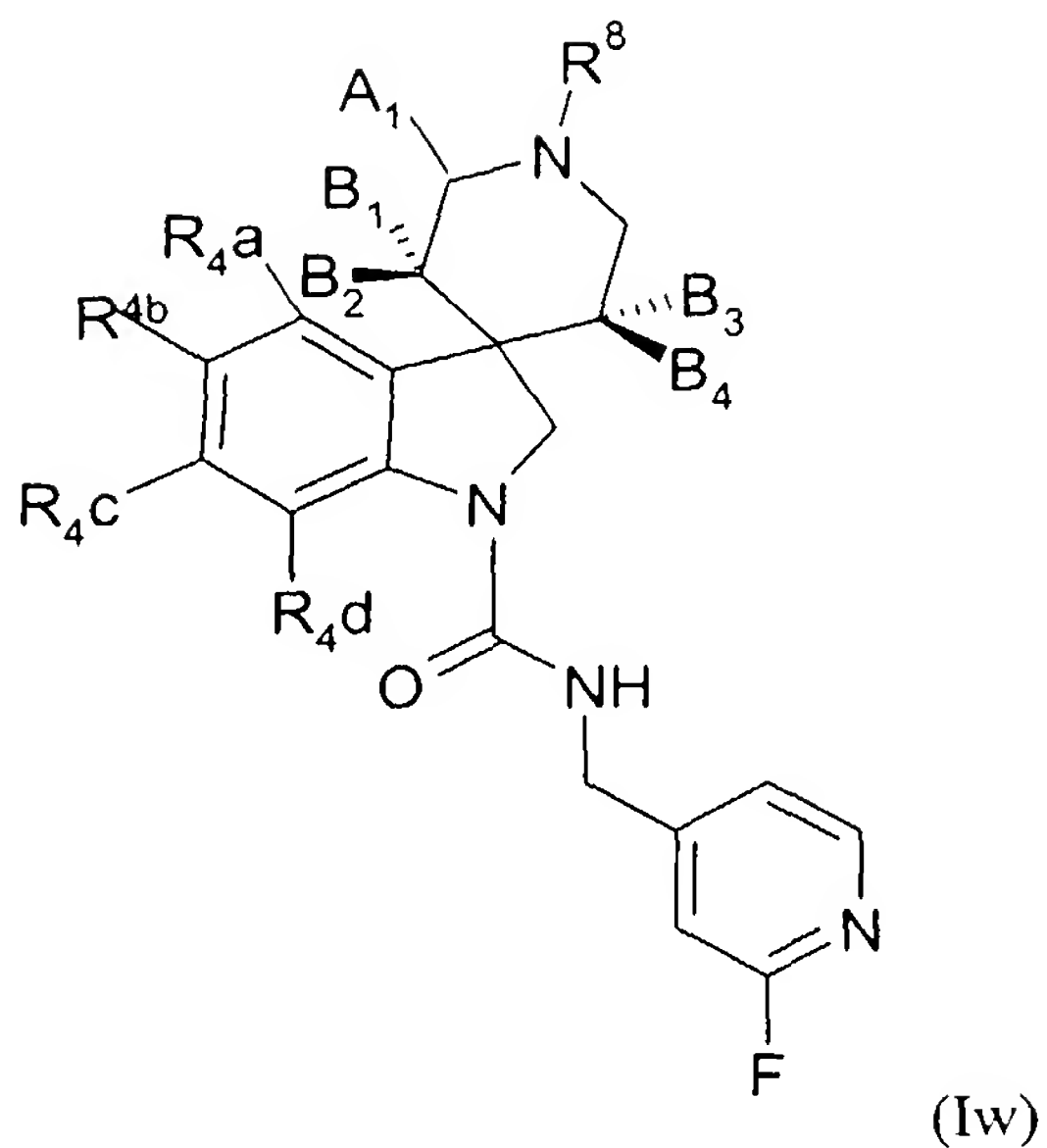
wherein A_1 is hydrogen, B_1 is CH_3 , B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table XXII provides 782 compounds of formula Iv



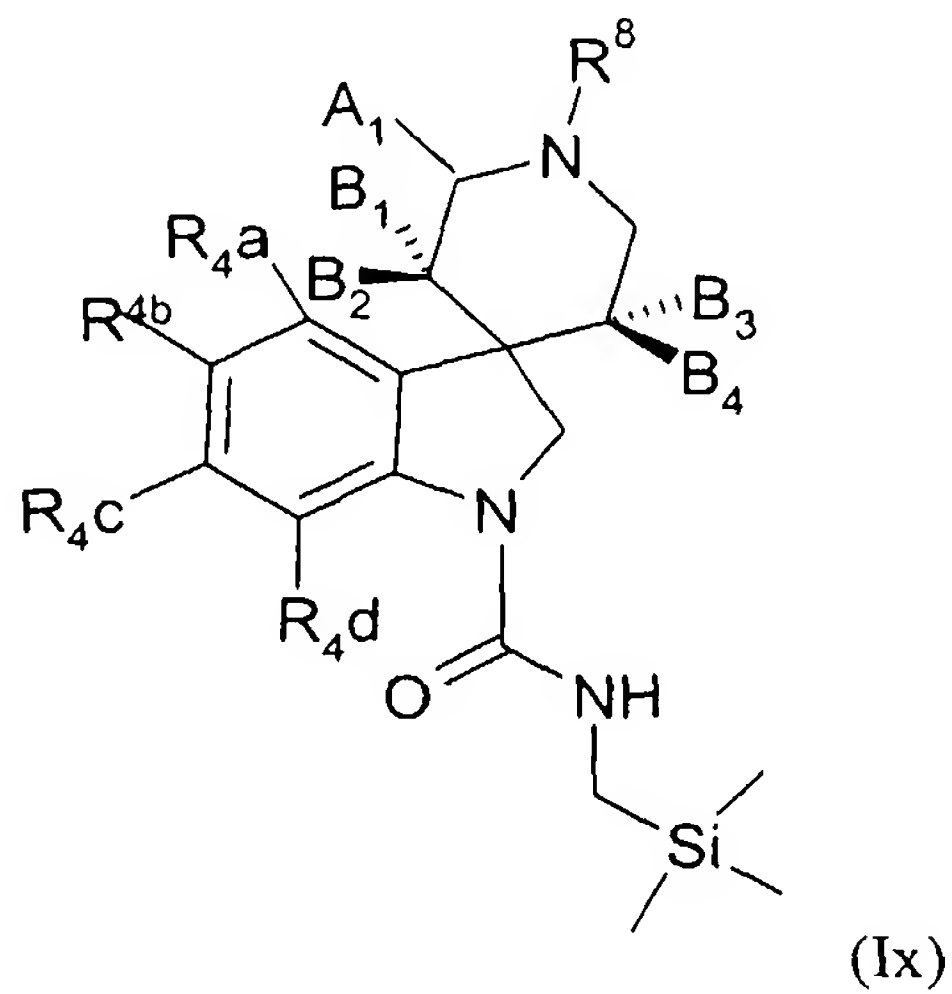
wherein A_1 is hydrogen, B_1 is CH_3 , B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table XXIII provides 782 compounds of formula Iw



wherein A_1 is hydrogen, B_1 is CH_3 , B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table XXIV provides 782 compounds of formula Ix

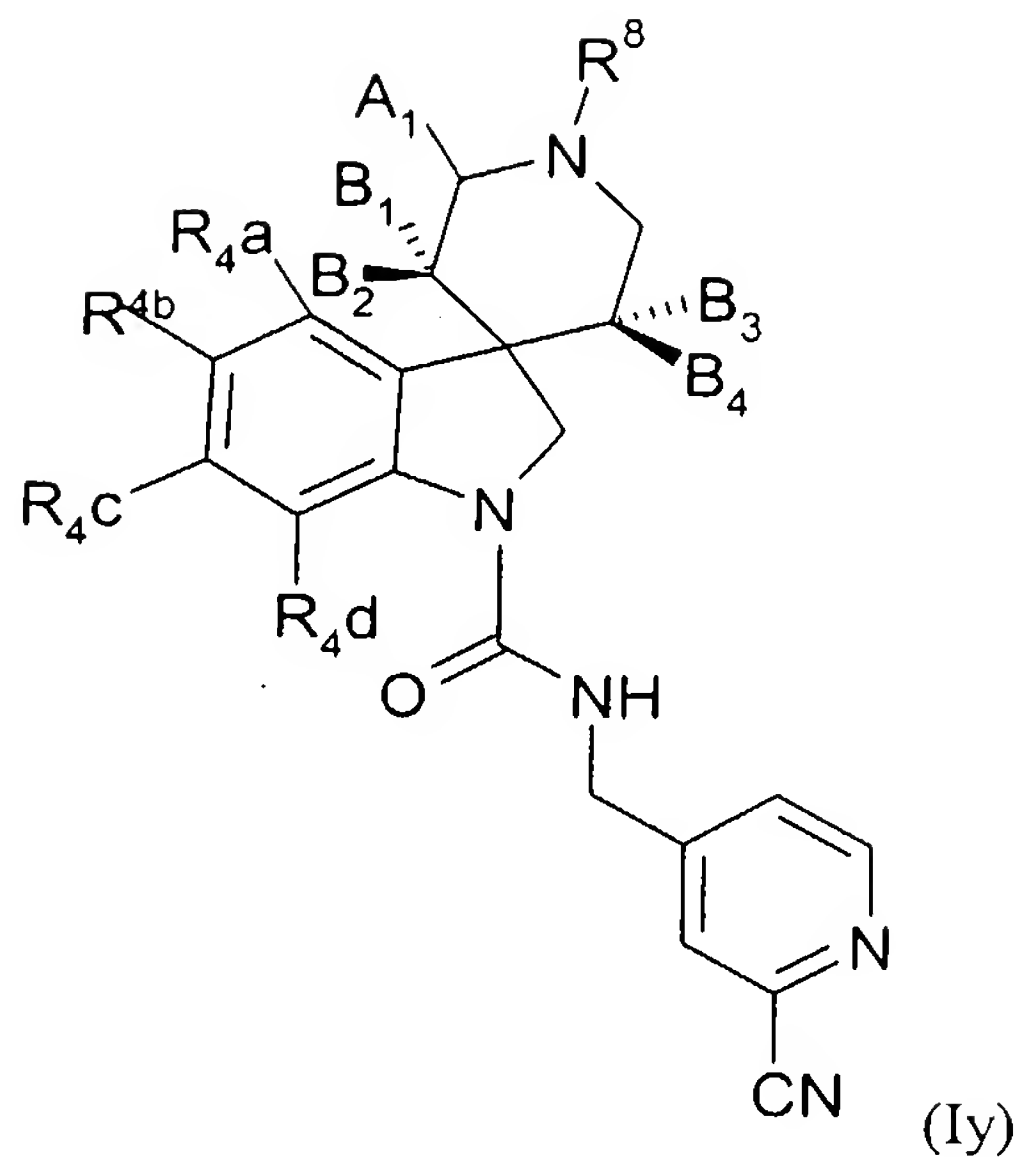


5

wherein A_1 is hydrogen, B_1 is CH_3 , B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

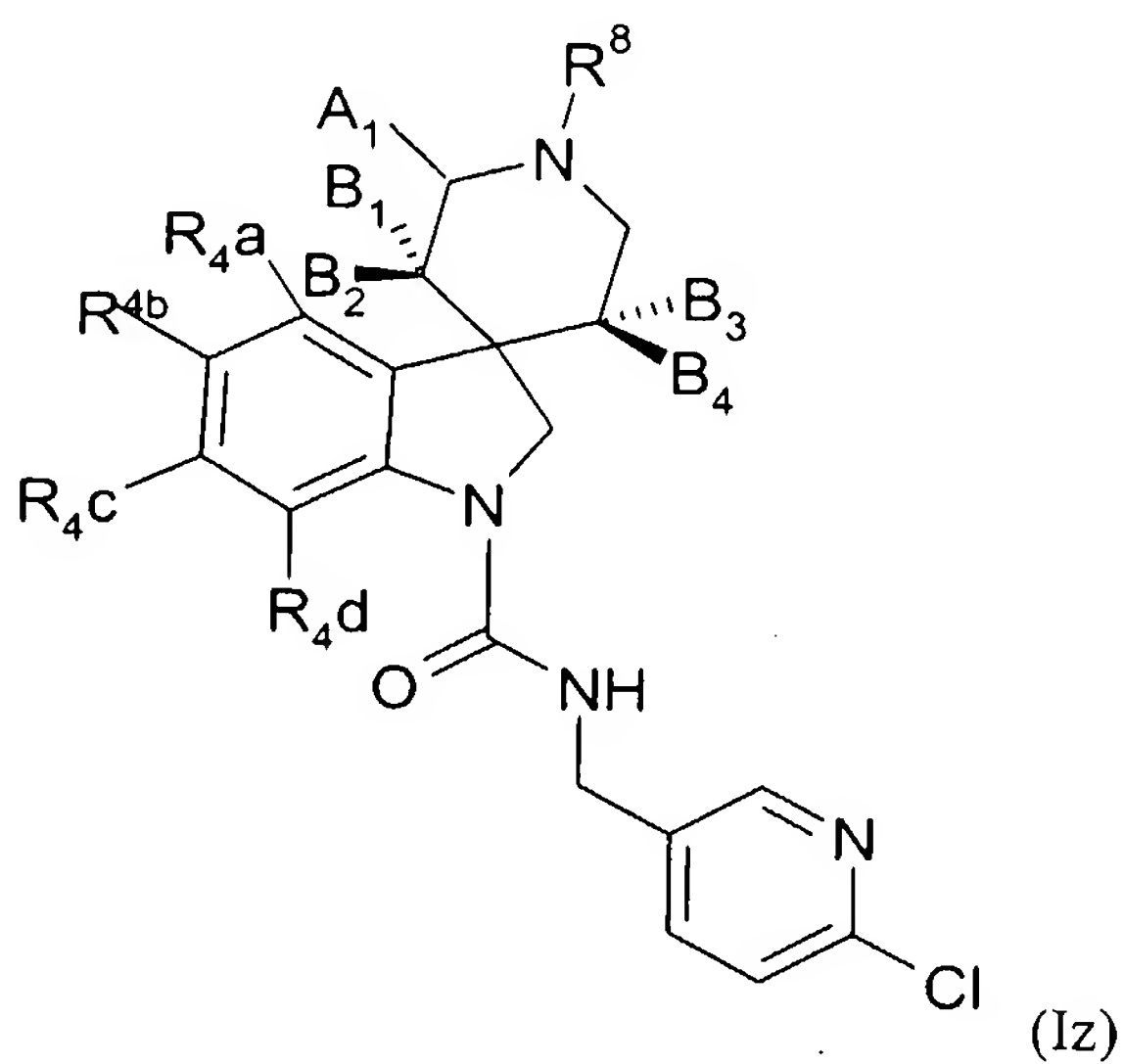
Table XXV provides 782 compounds of formula Iy

- 52 -



wherein A_1 is hydrogen, B_1 is CH_3 , B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

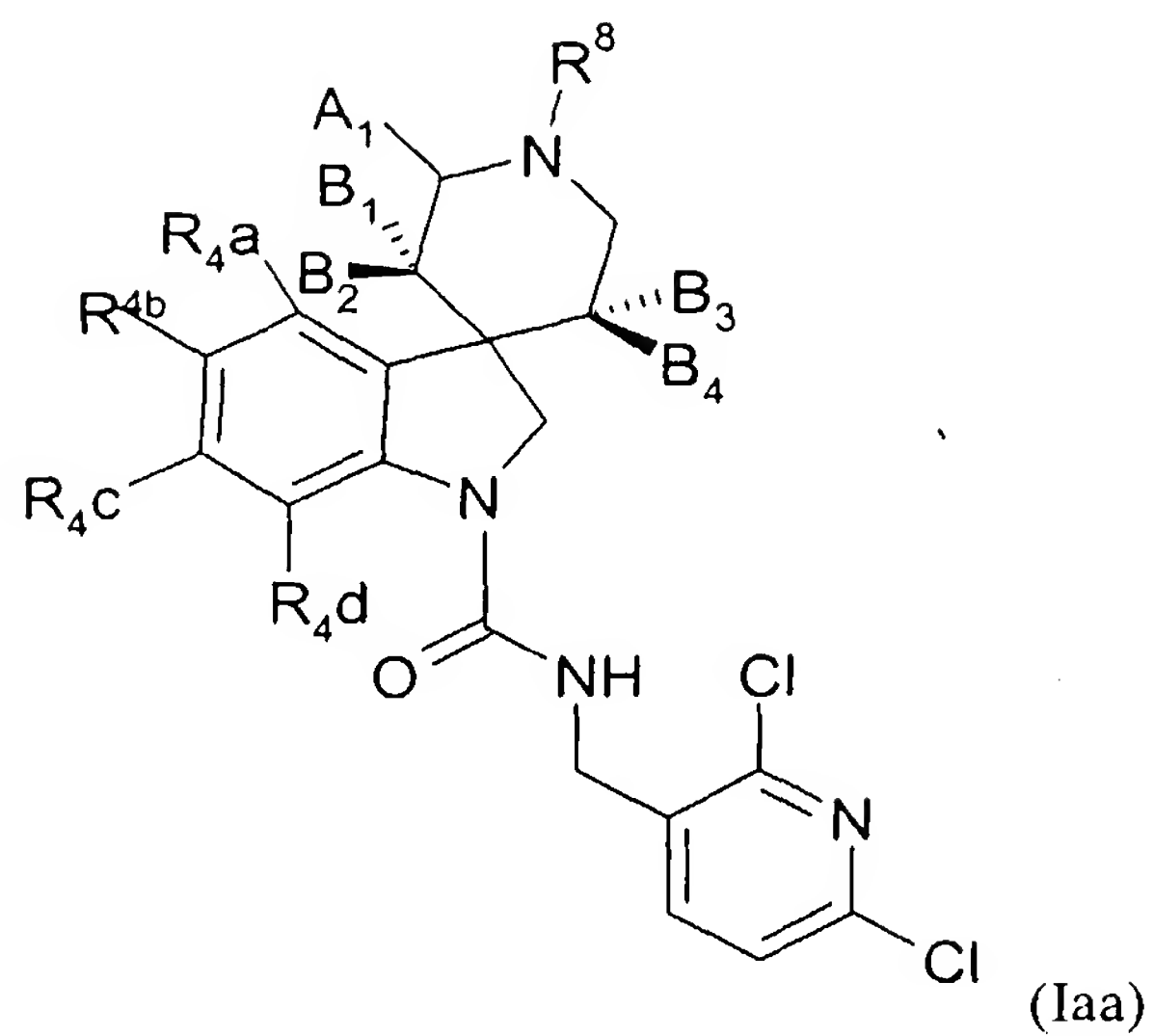
Table XXVI provides 782 compounds of formula Iz



5

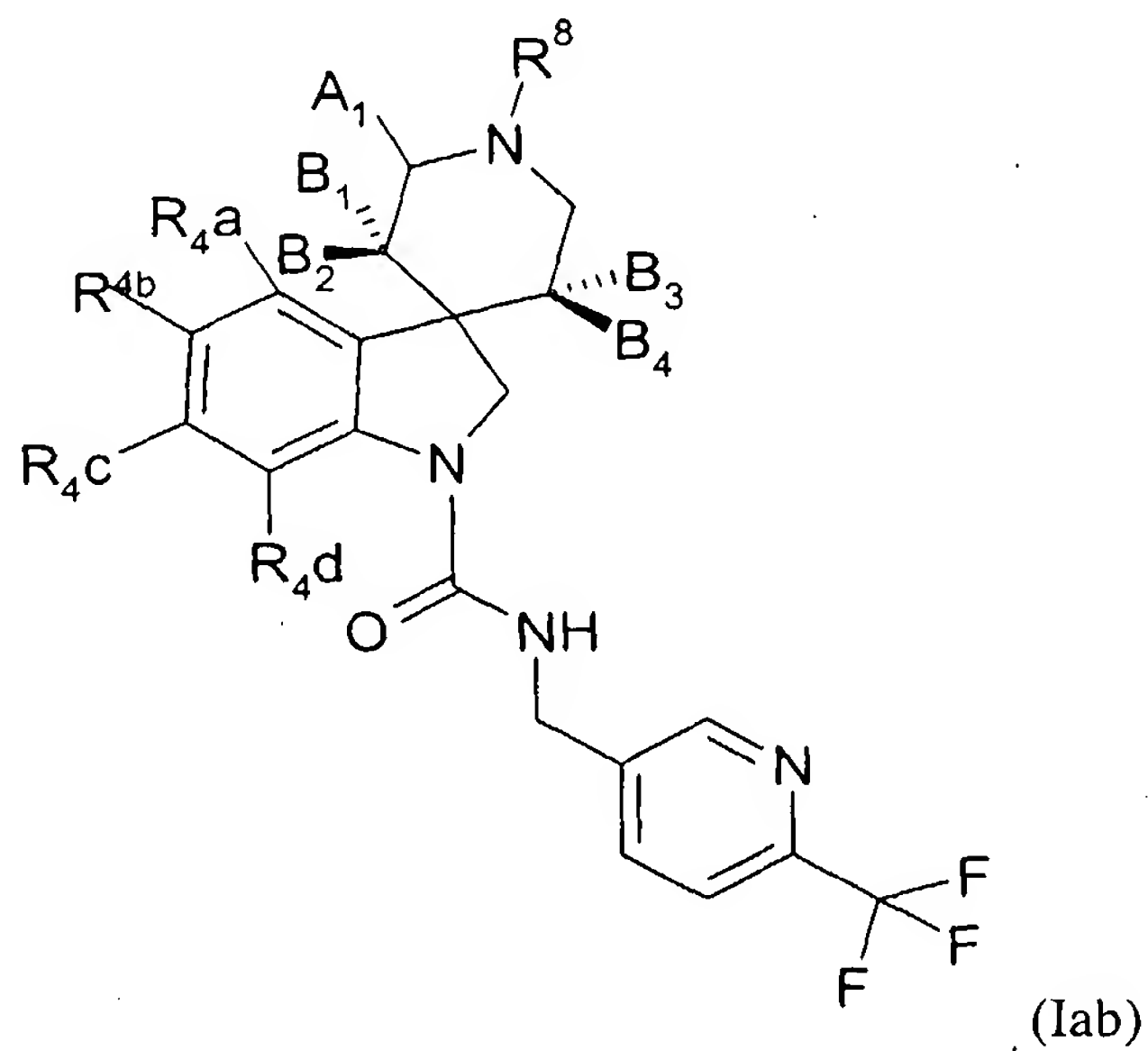
wherein A_1 is hydrogen, B_1 is CH_3 , B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table XXVII provides 782 compounds of formula Iaa



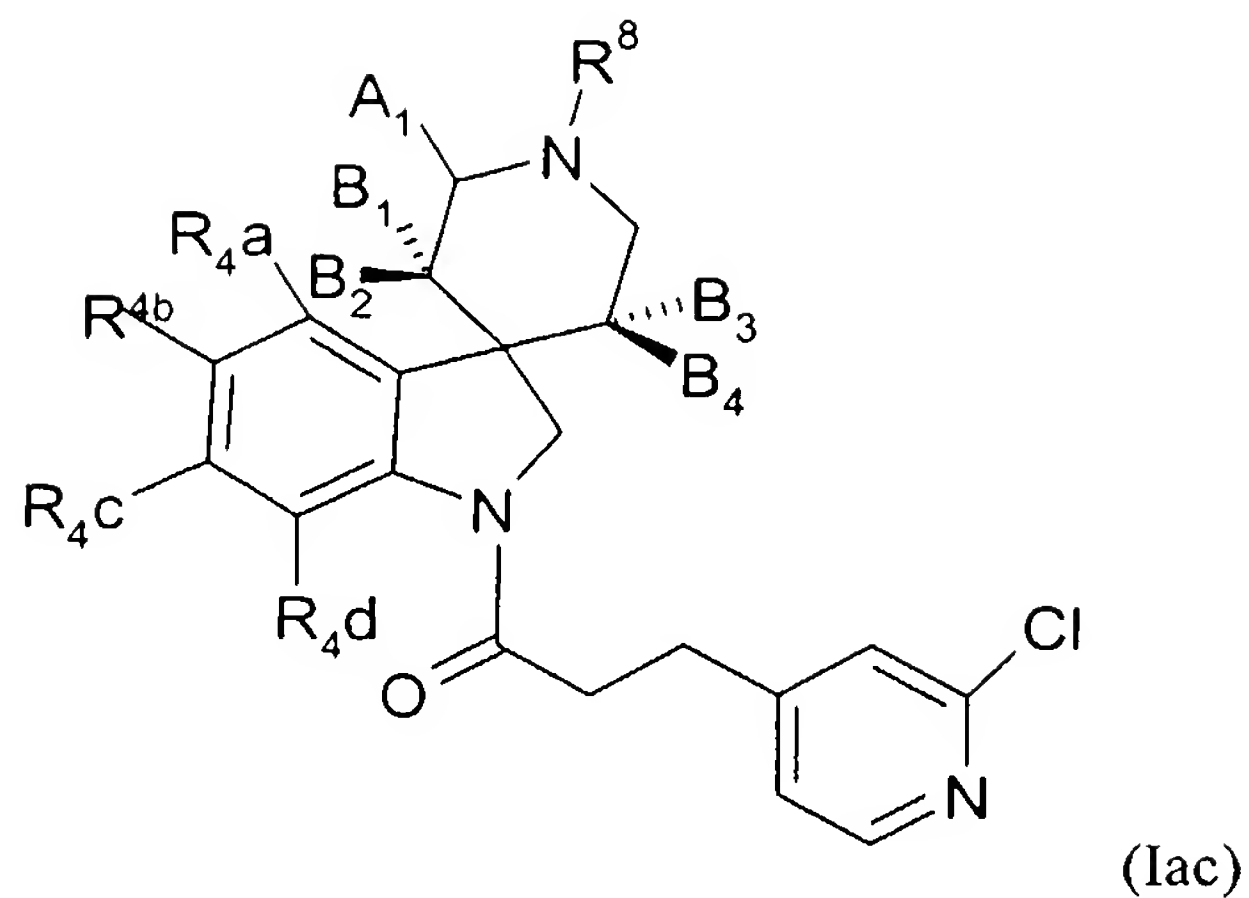
wherein A_1 is hydrogen, B_1 is CH_3 , B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table XXVIII provides 782 compounds of formula Iab



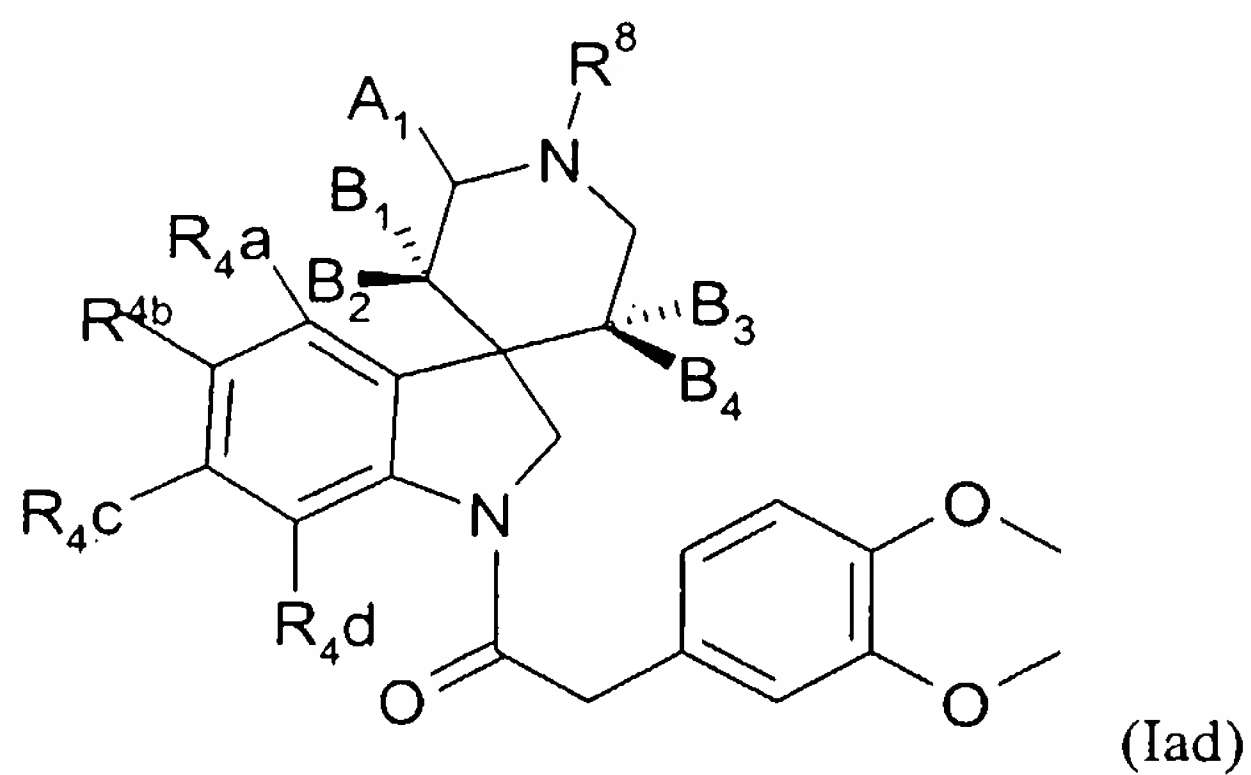
wherein A_1 is hydrogen, B_1 is CH_3 , B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table XXIX provides 782 compounds of formula Iac



wherein A_1 is hydrogen, B_1 is CH_3 , B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

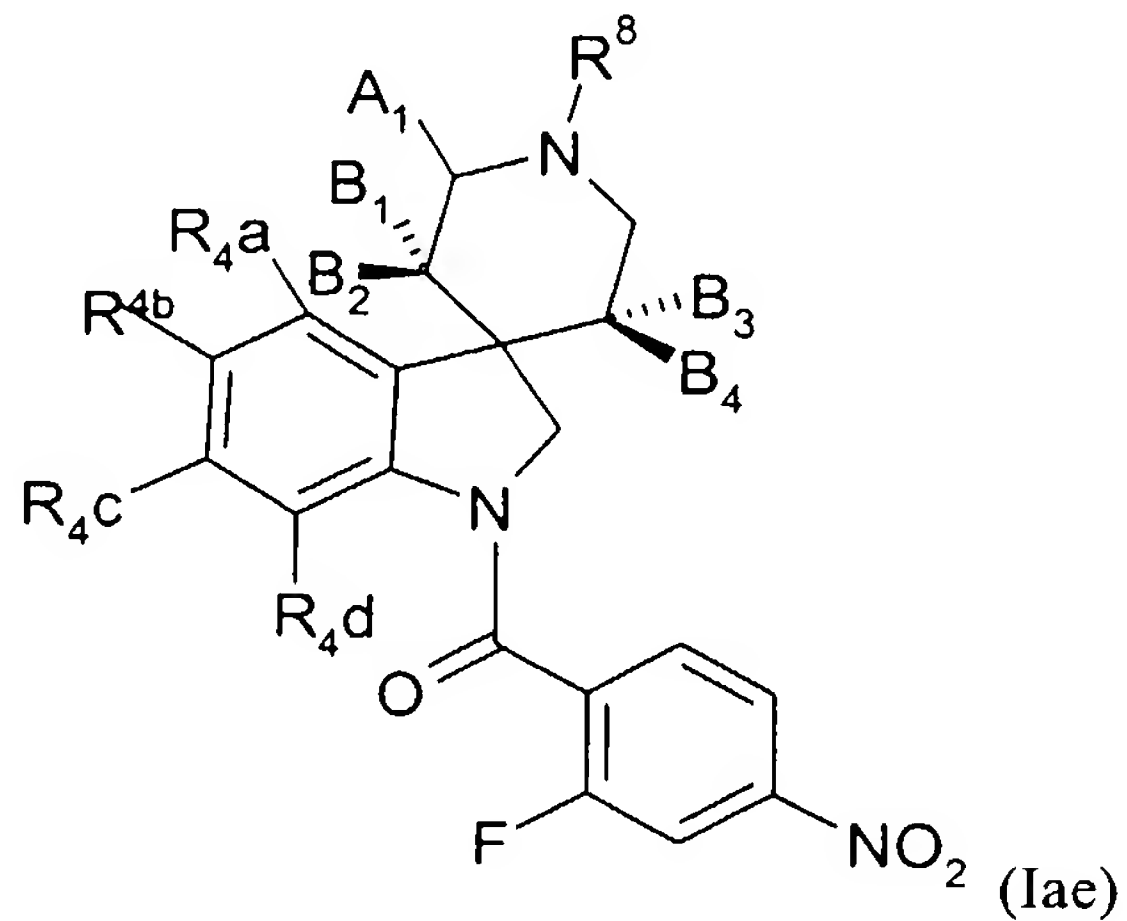
Table XXX provides 782 compounds of formula Iad



5

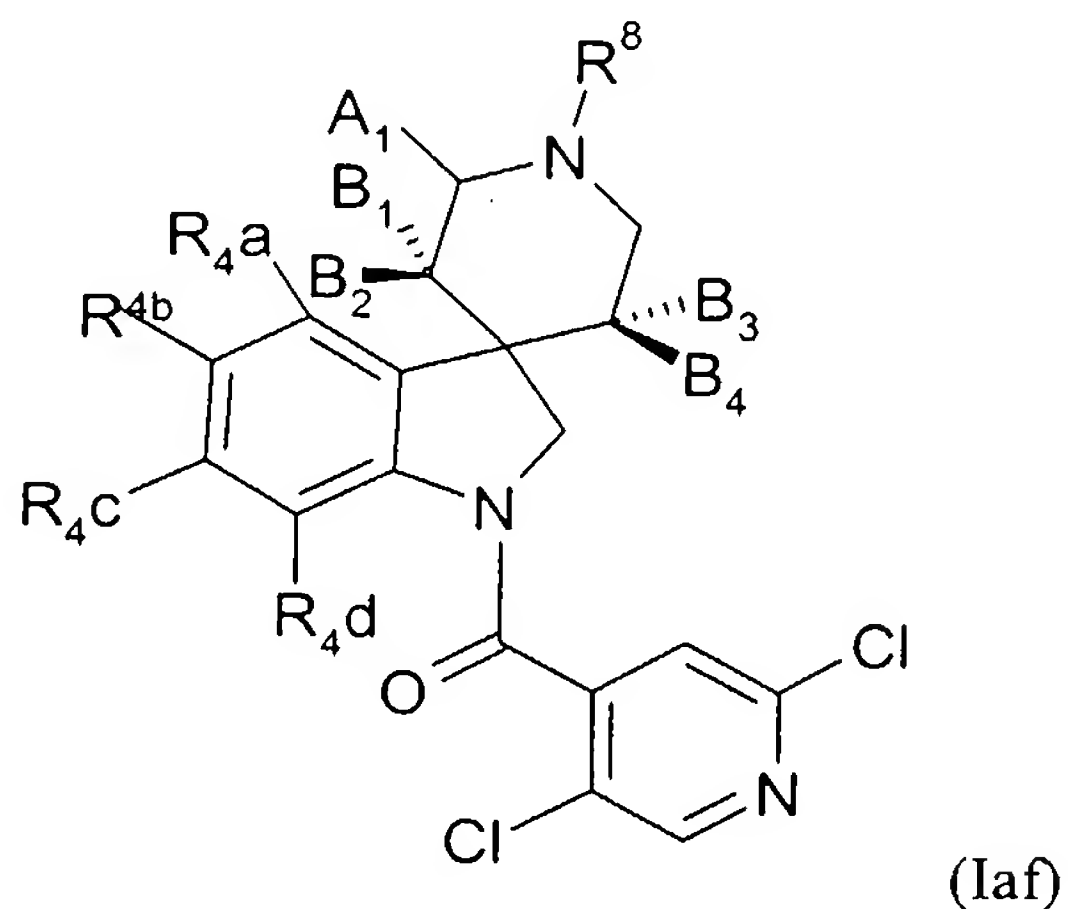
wherein A_1 is hydrogen, B_1 is CH_3 , B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table XXXI provides 782 compounds of formula Iae



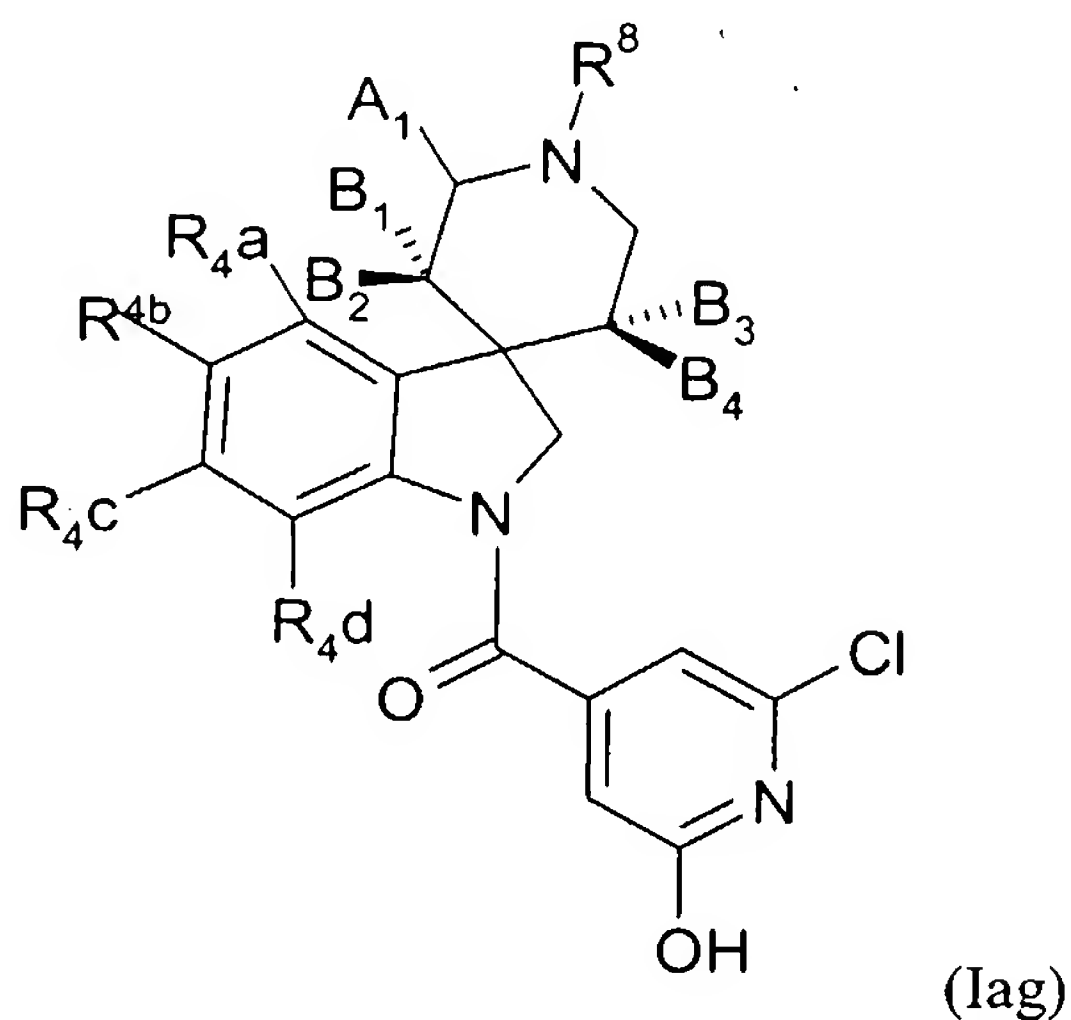
wherein A_1 is hydrogen, B_1 is CH_3 , B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table XXXII provides 782 compounds of formula Ia_f



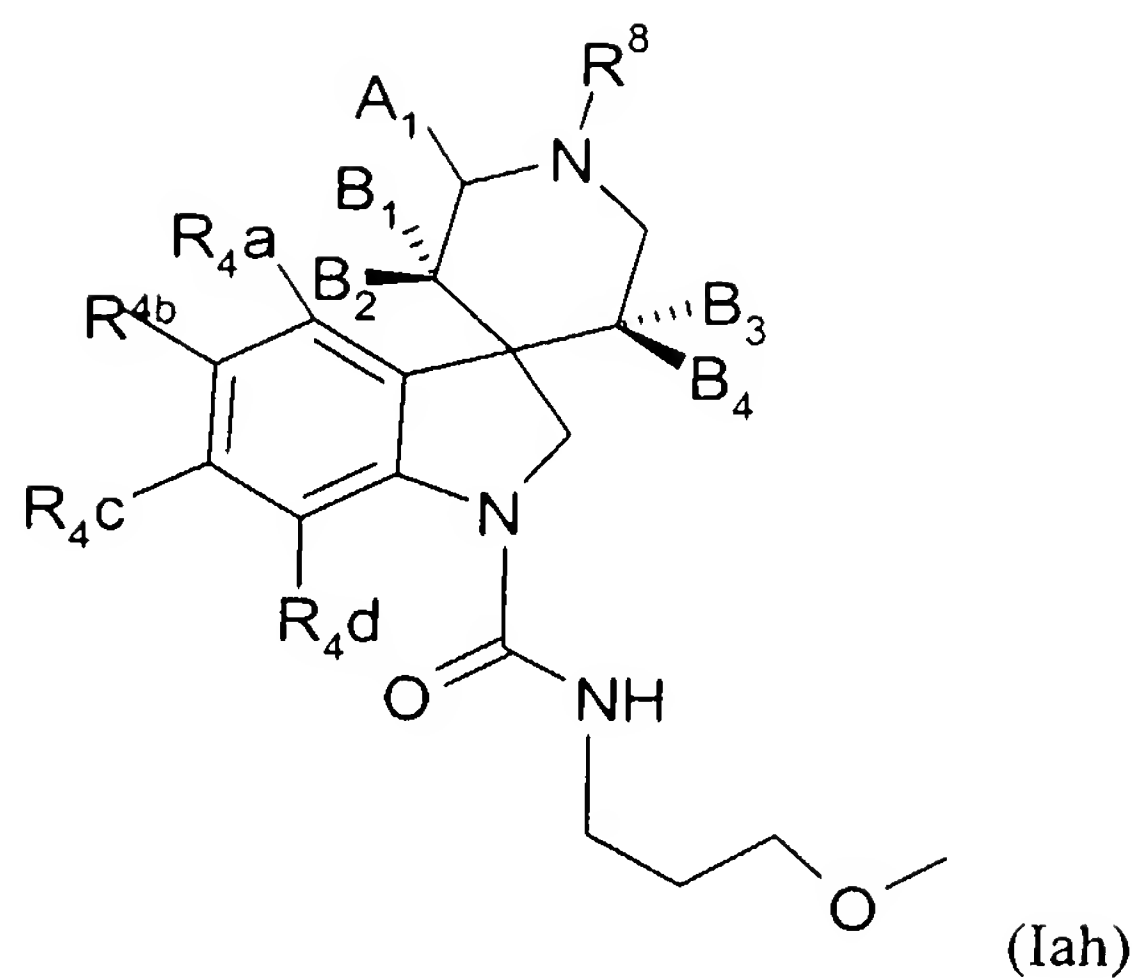
5 wherein A_1 is hydrogen, B_1 is CH_3 , B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table XXXIII provides 782 compounds of formula Ia_g



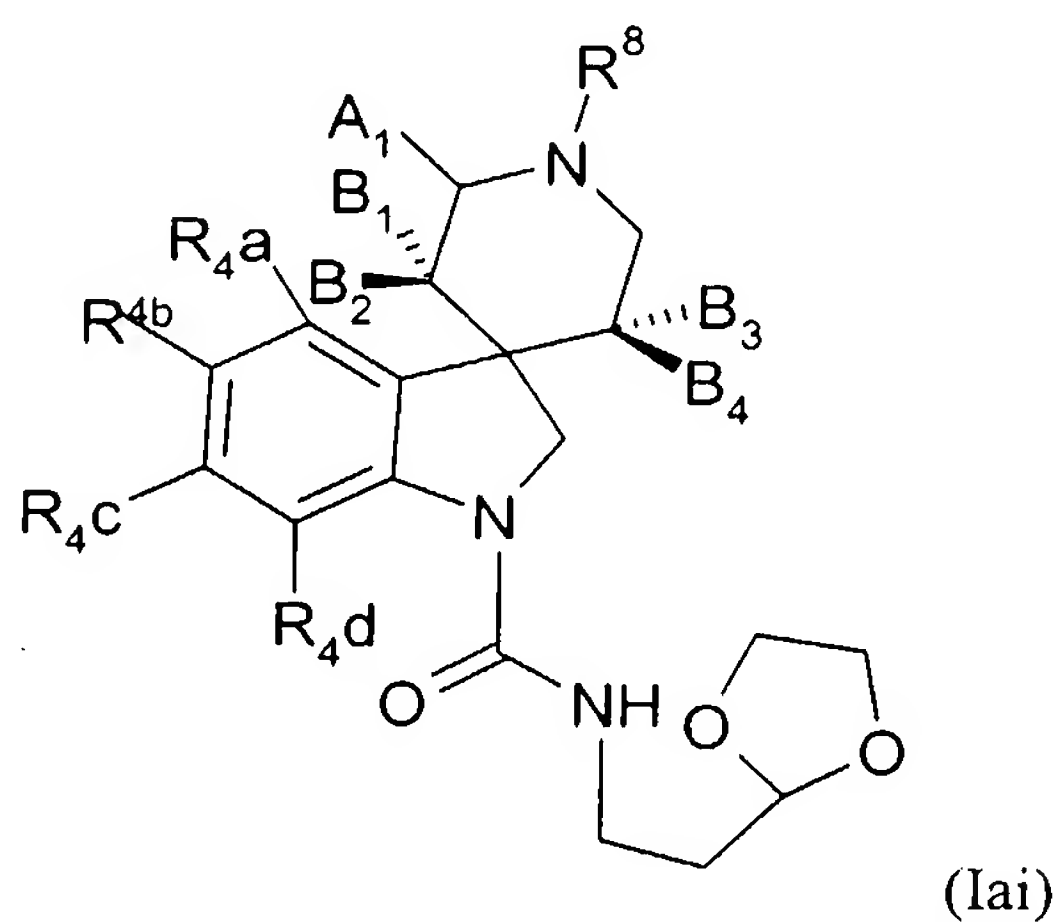
10 wherein A_1 is hydrogen, B_1 is CH_3 , B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table XXXIV provides 782 compounds of formula Ia_h



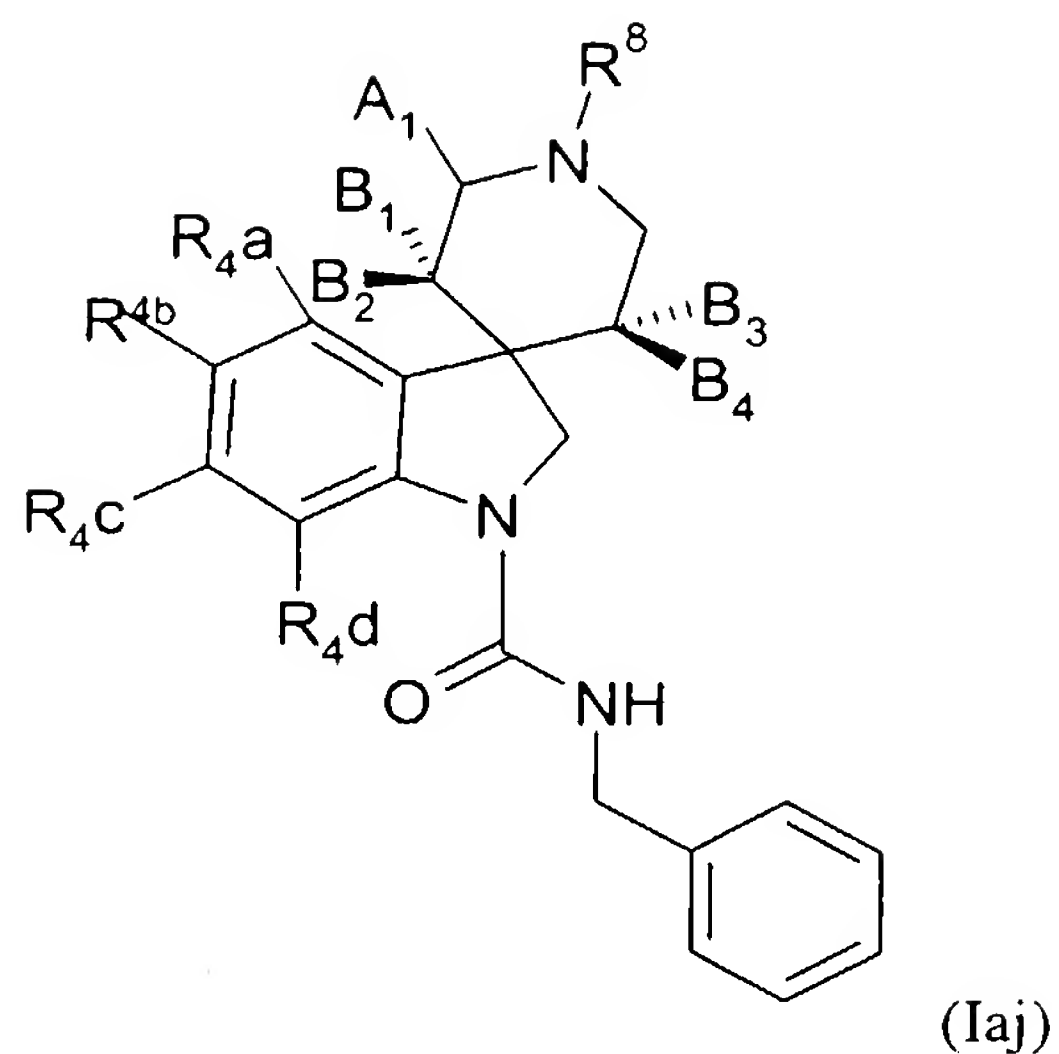
wherein A_1 is hydrogen, B_1 is CH_3 , B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table XXXV provides 782 compounds of formula Iai



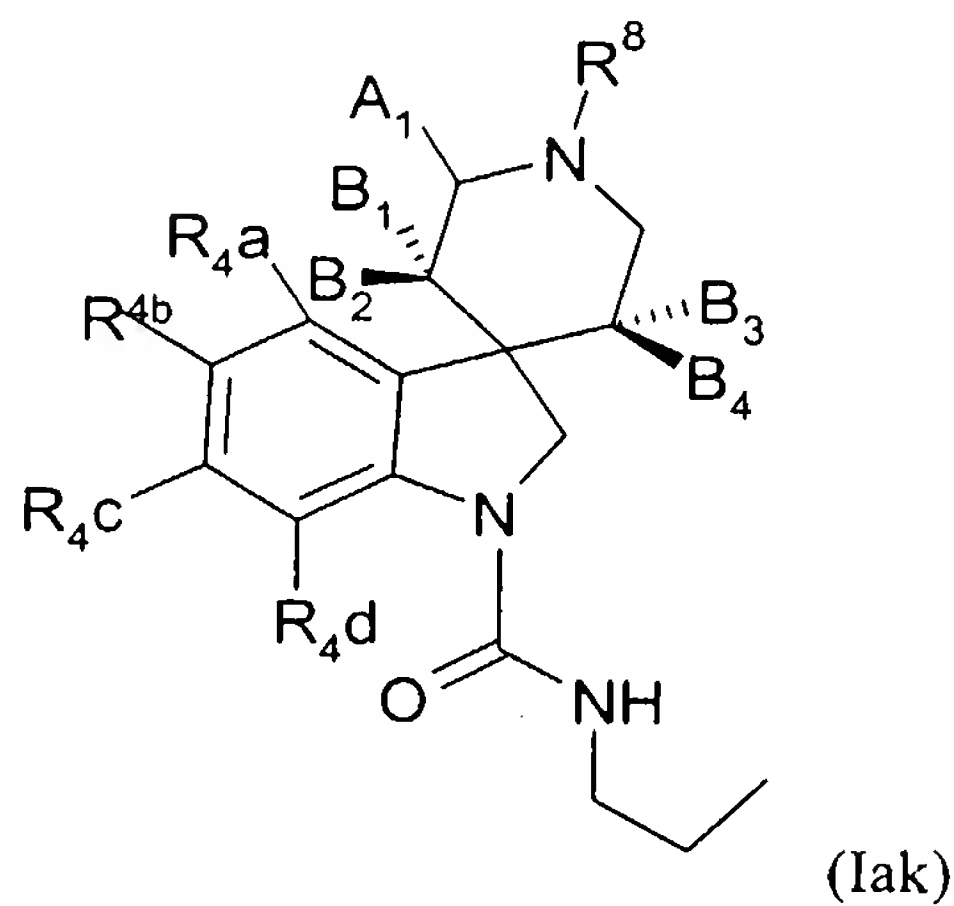
wherein A_1 is hydrogen, B_1 is CH_3 , B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table XXXVI provides 782 compounds of formula Iaj



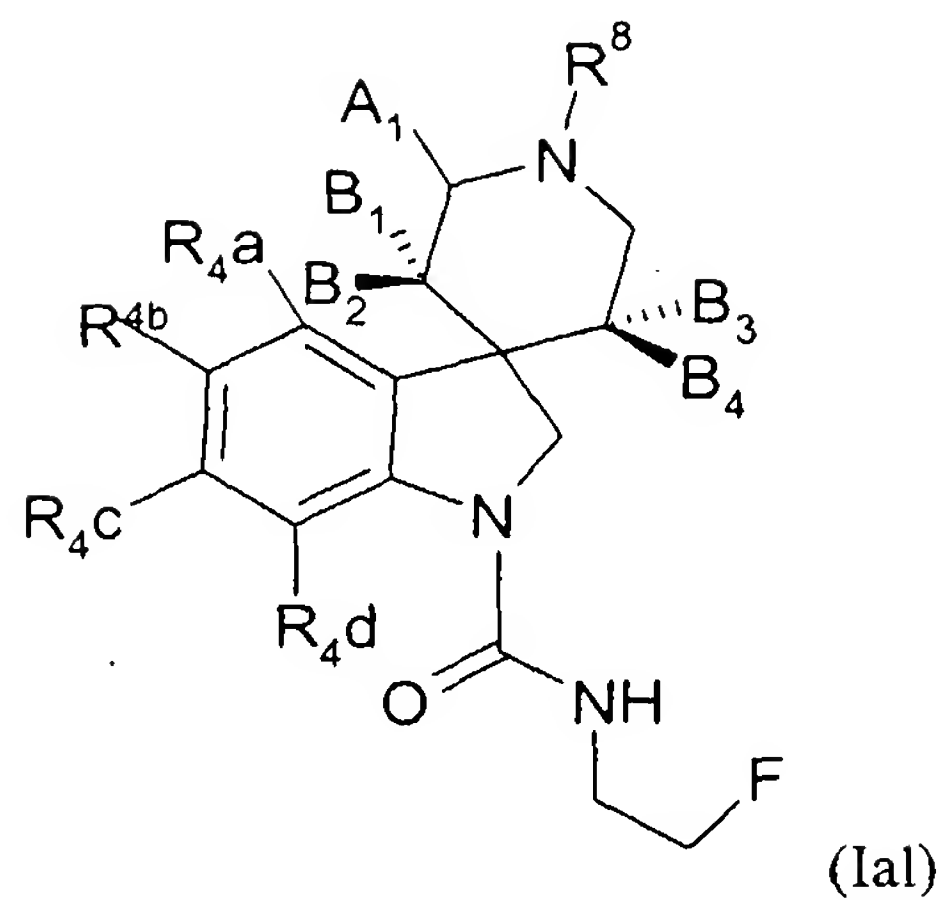
wherein A_1 is hydrogen, B_1 is CH_3 , B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table XXXVII provides 782 compounds of formula Iak



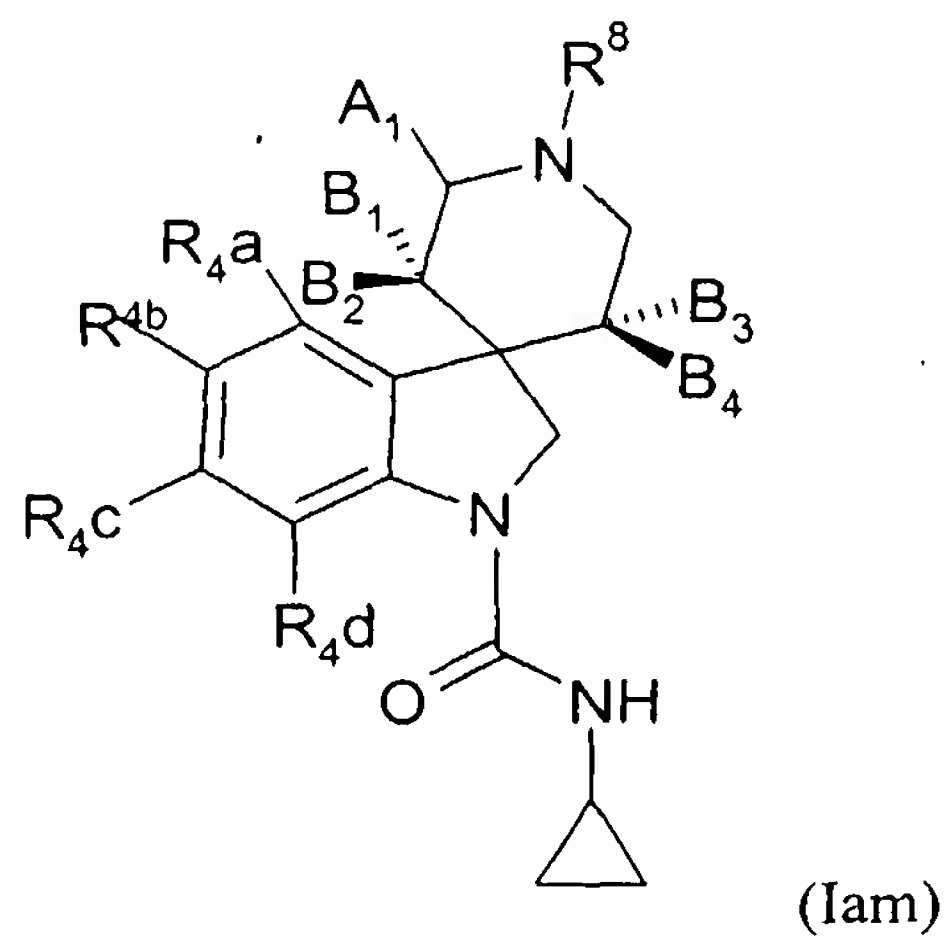
wherein A_1 is hydrogen, B_1 is CH_3 , B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table XXXVIII provides 782 compounds of formula Ial



wherein A_1 is hydrogen, B_1 is CH_3 , B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table XXXIX provides 782 compounds of formula Iam

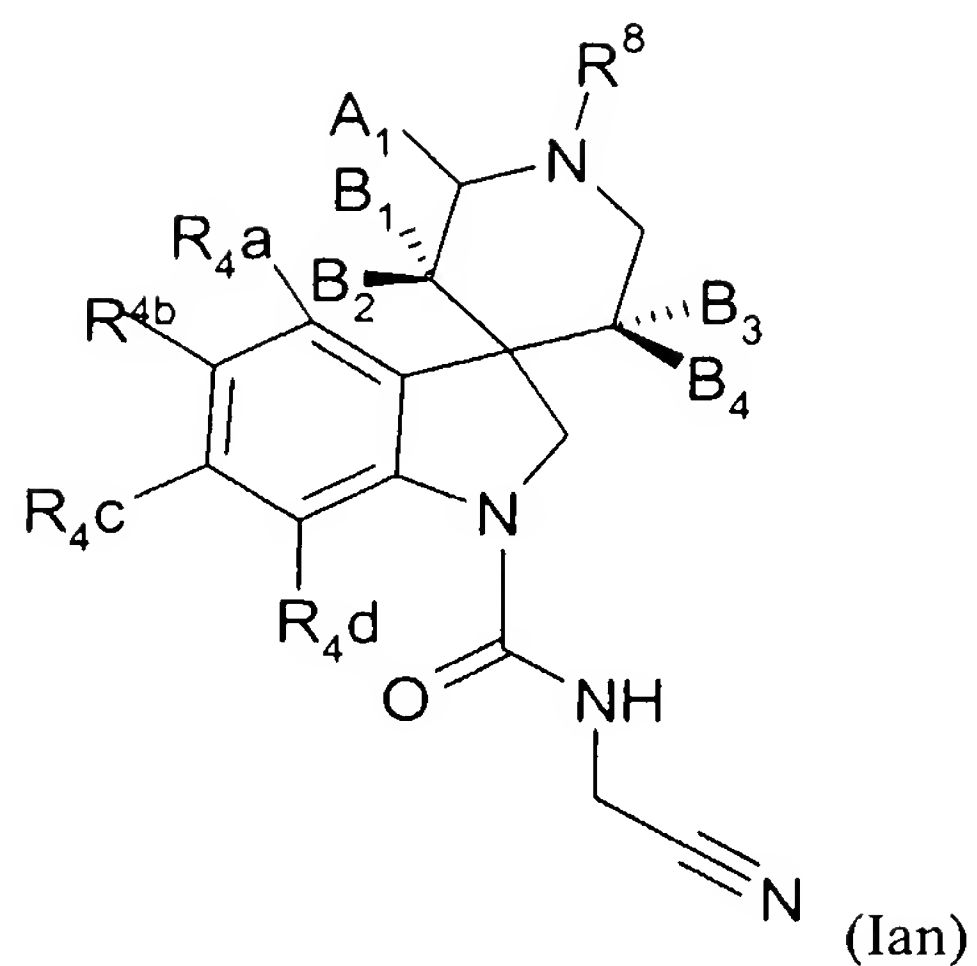


5

wherein A_1 is hydrogen, B_1 is CH_3 , B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

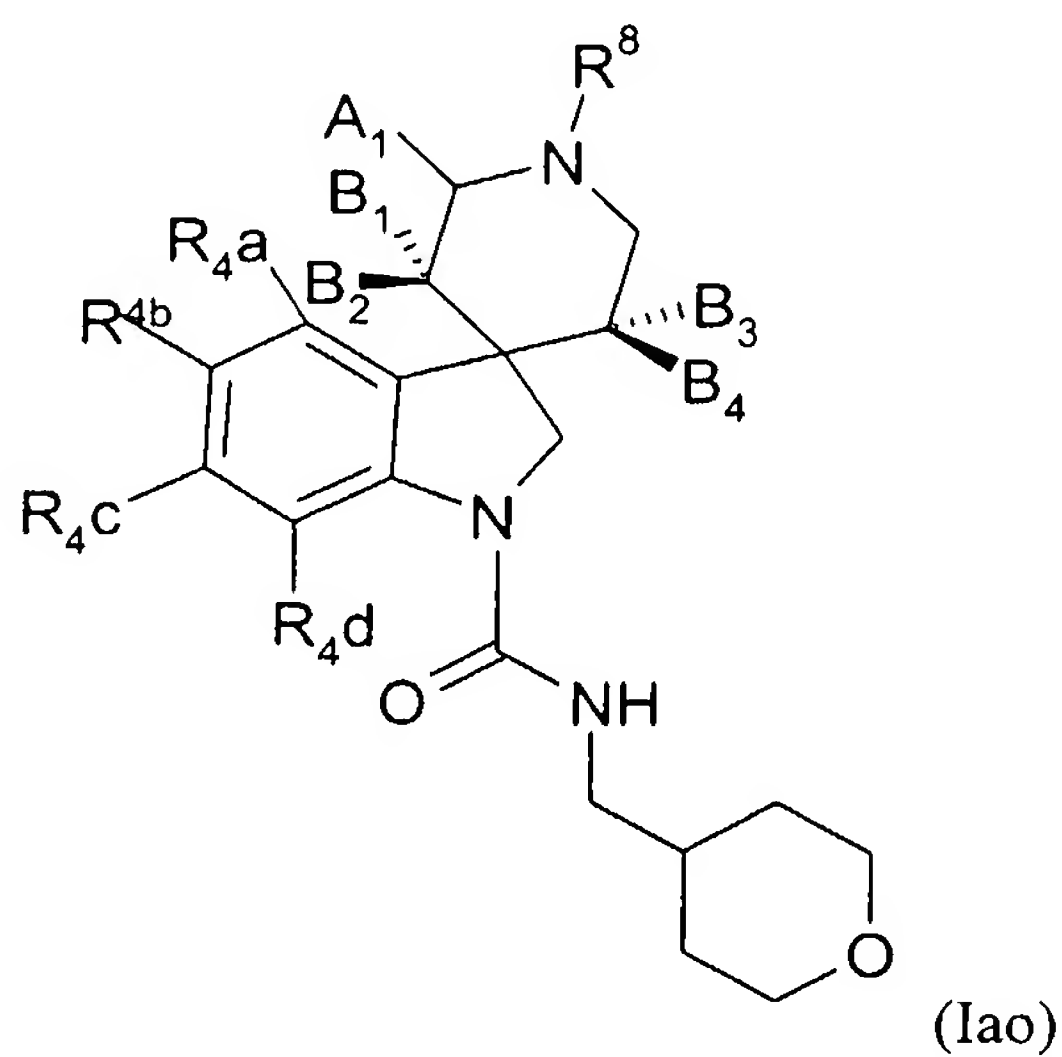
Table XL provides 782 compounds of formula Ian

- 59 -



wherein A_1 is hydrogen, B_1 is CH_3 , B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

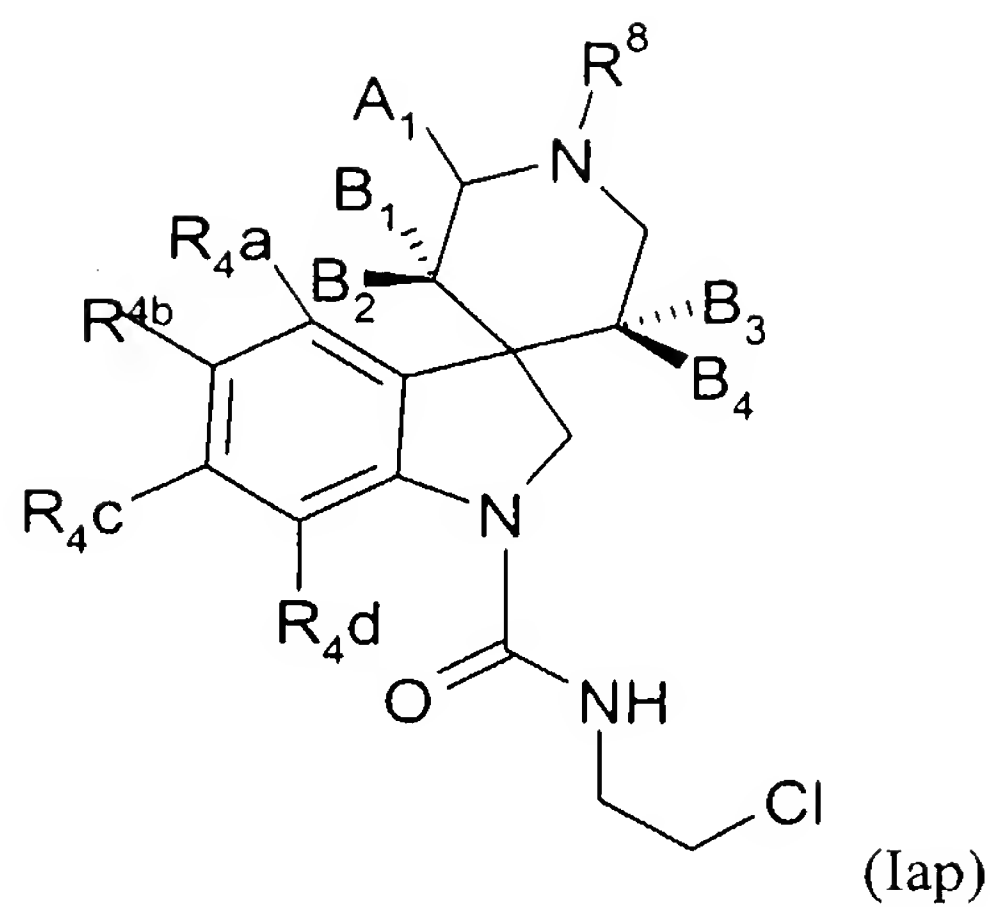
Table XLI provides 782 compounds of formula Iao



wherein A_1 is hydrogen, B_1 is CH_3 , B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

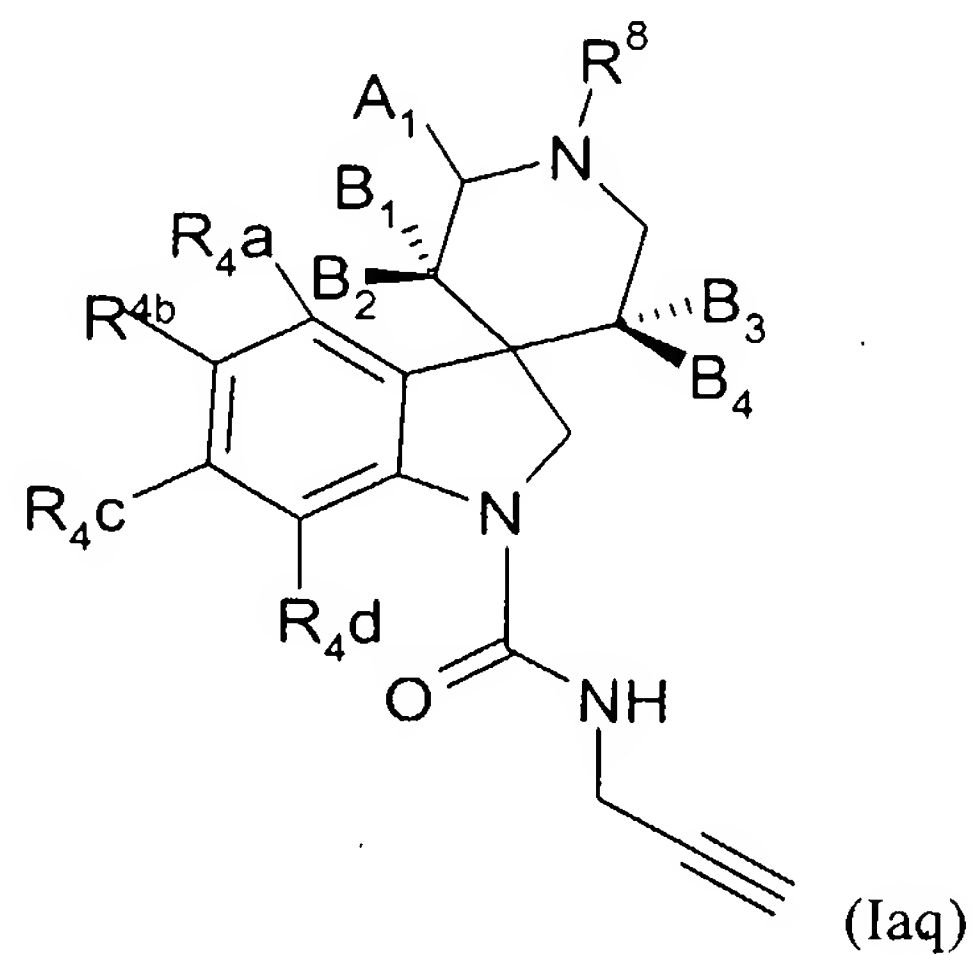
Table XLII provides 782 compounds of formula Iap

- 60 -



wherein A_1 is hydrogen, B_1 is CH_3 , B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table XLIII provides 782 compounds of formula Ia_q

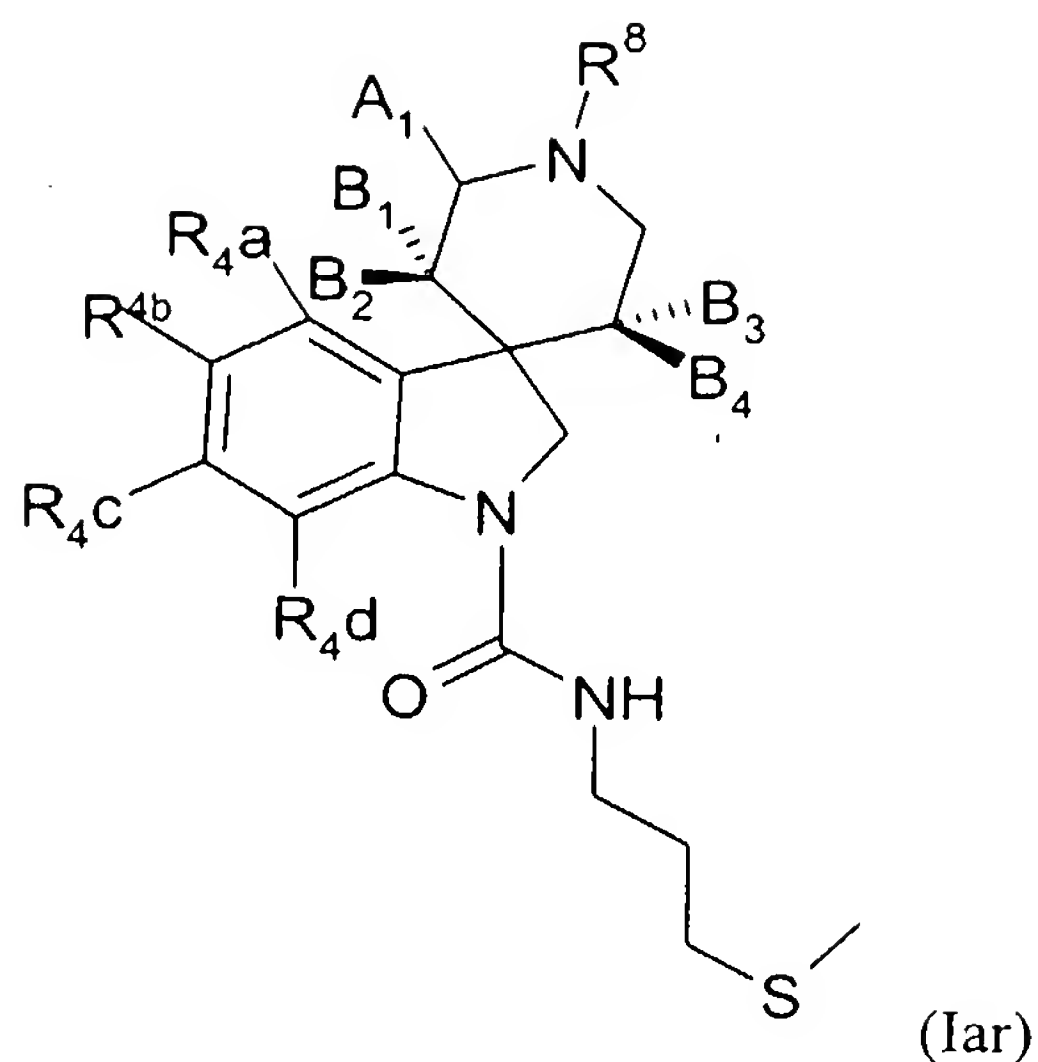


5

wherein A_1 is hydrogen, B_1 is CH_3 , B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

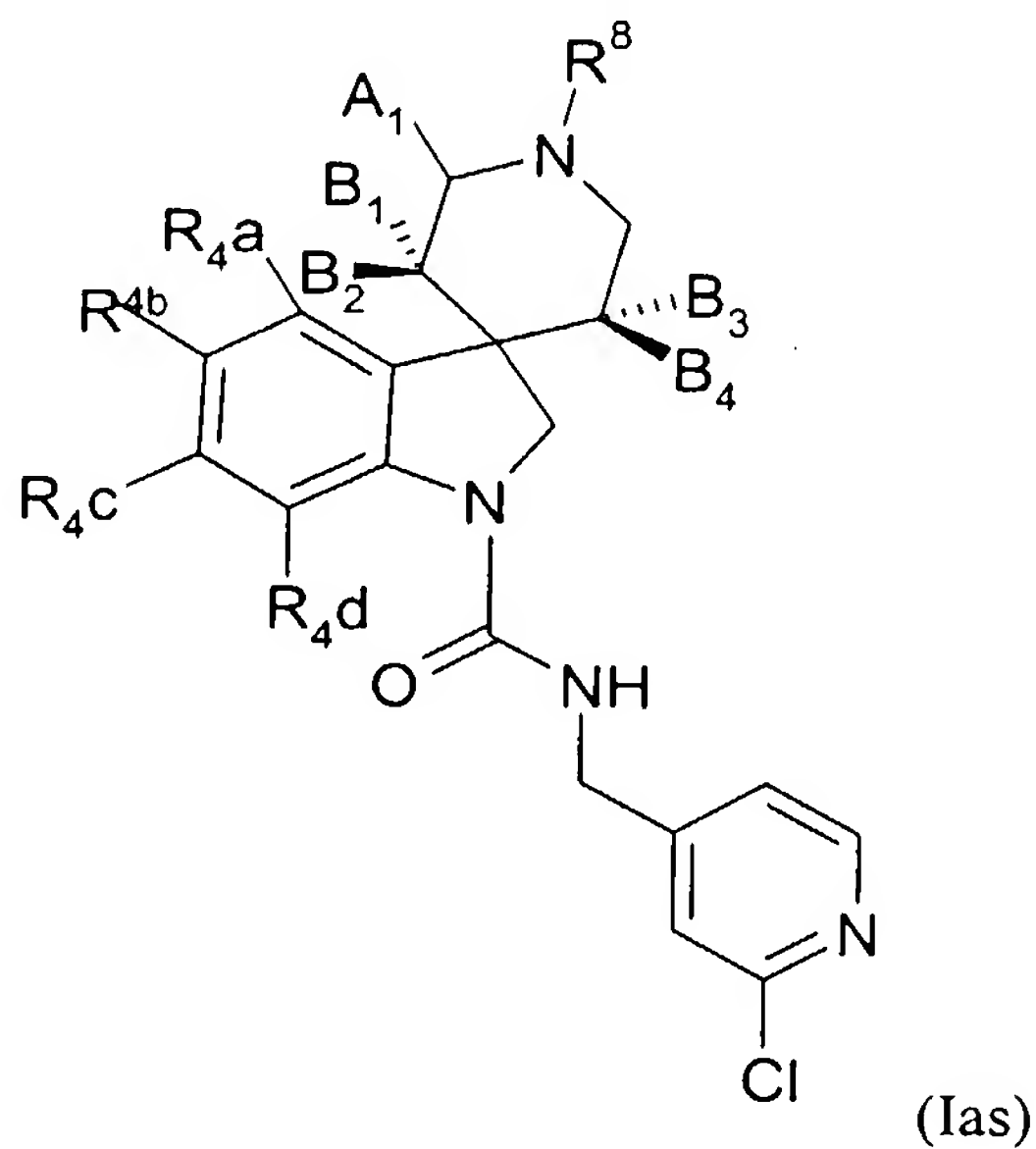
Table XLIV provides 782 compounds of formula Ia_r

- 61 -



wherein A_1 is hydrogen, B_1 is CH_3 , B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

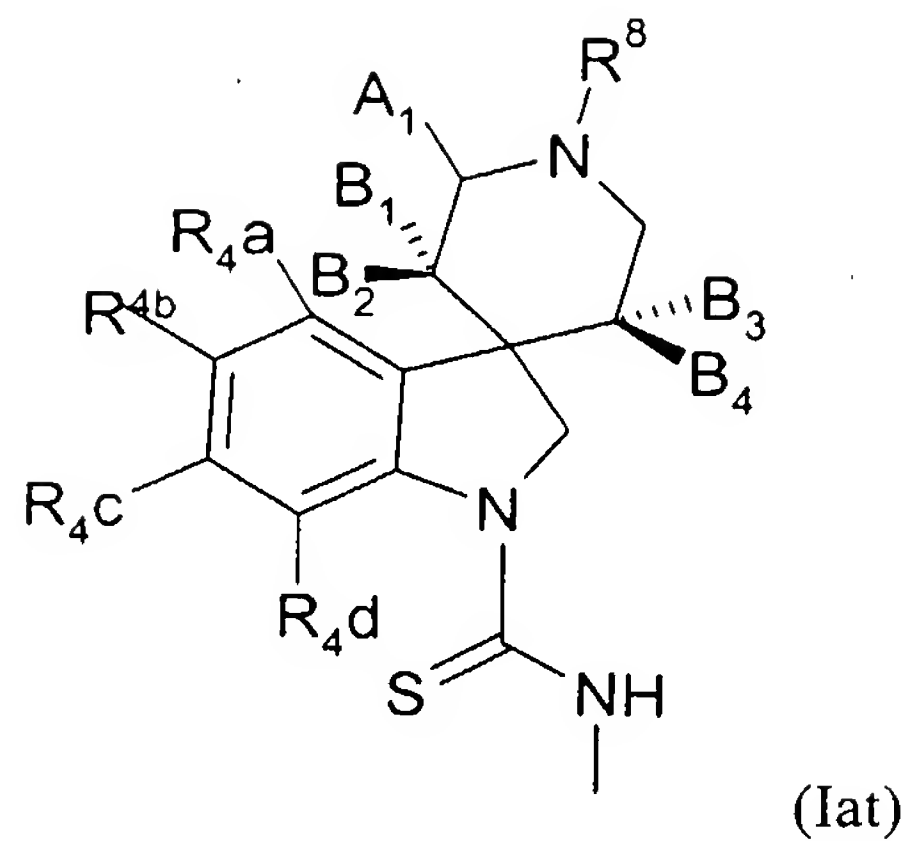
Table XLV provides 782 compounds of formula Ias



5

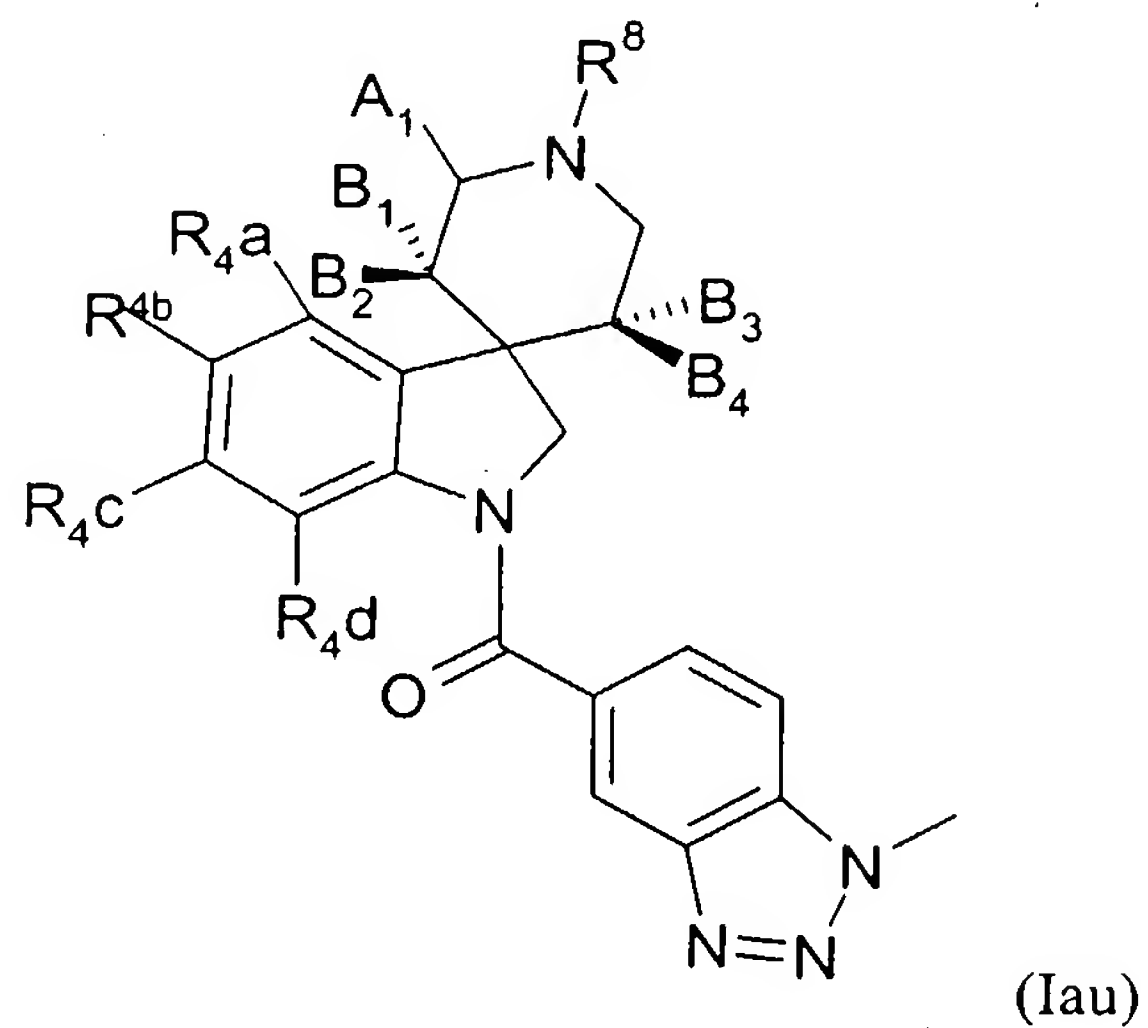
wherein A_1 is hydrogen, B_1 is CH_3 , B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table XLVI provides 782 compounds of formula Iat



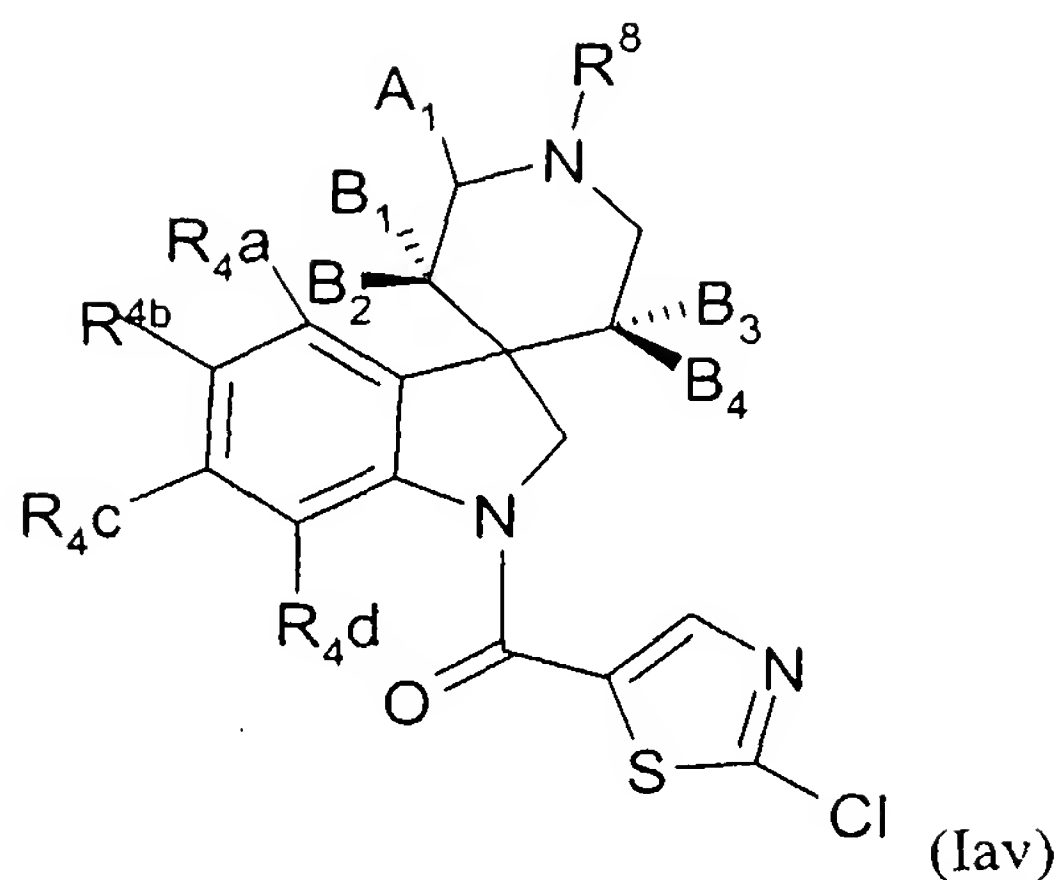
wherein A_1 is hydrogen, B_1 is CH_3 , B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table XLVII provides 782 compounds of formula Iau



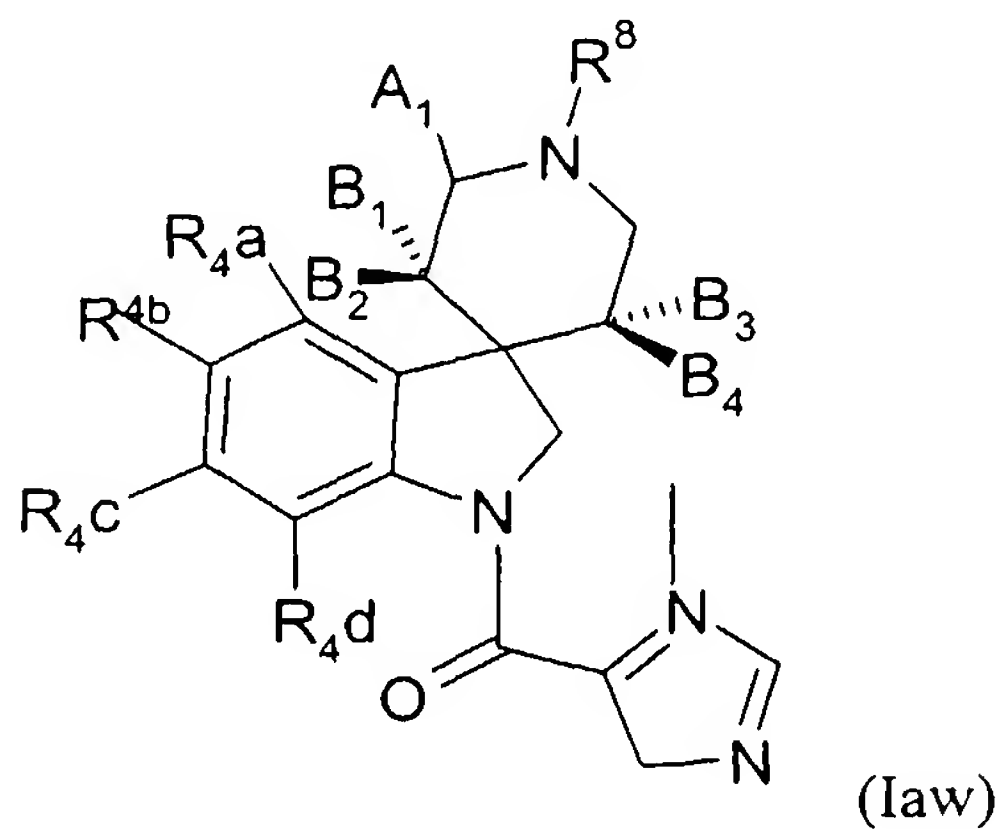
wherein A_1 is hydrogen, B_1 is CH_3 , B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table XLVIII provides 782 compounds of formula Iav



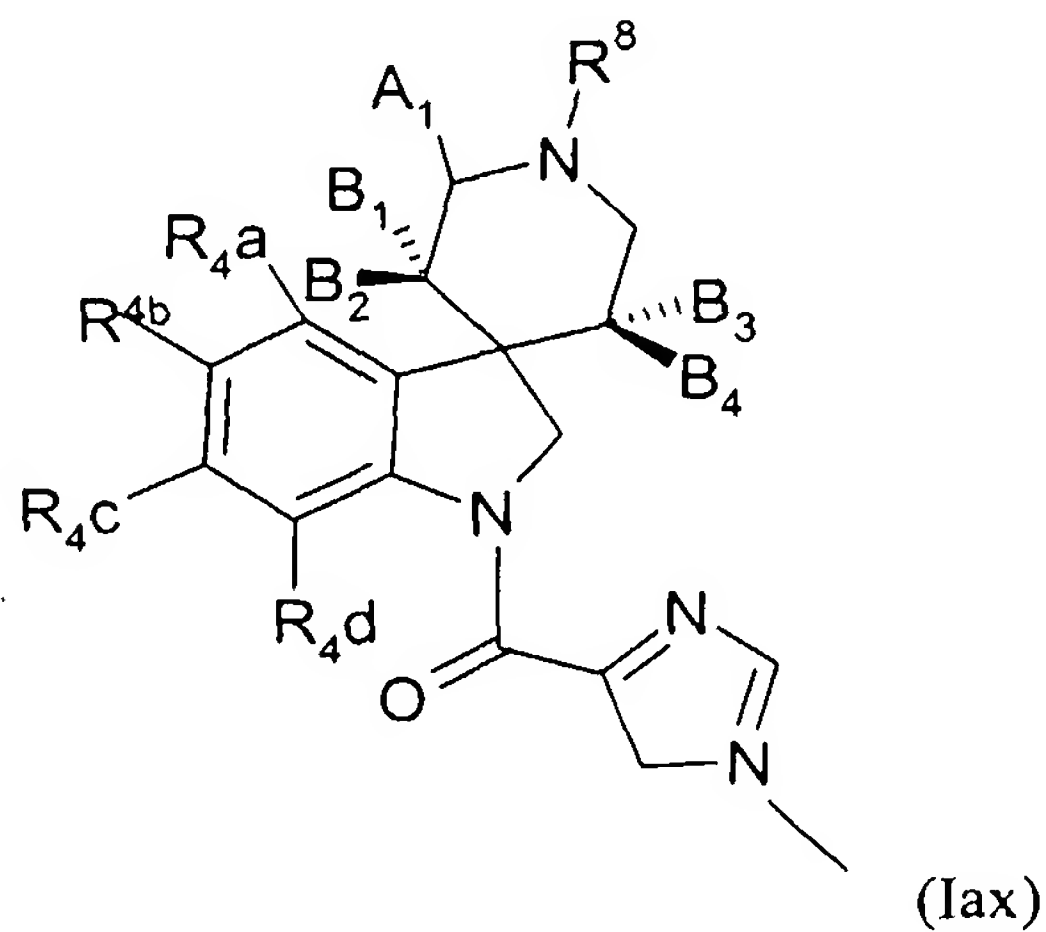
wherein A_1 is hydrogen, B_1 is CH_3 , B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table XLIX provides 782 compounds of formula Iav



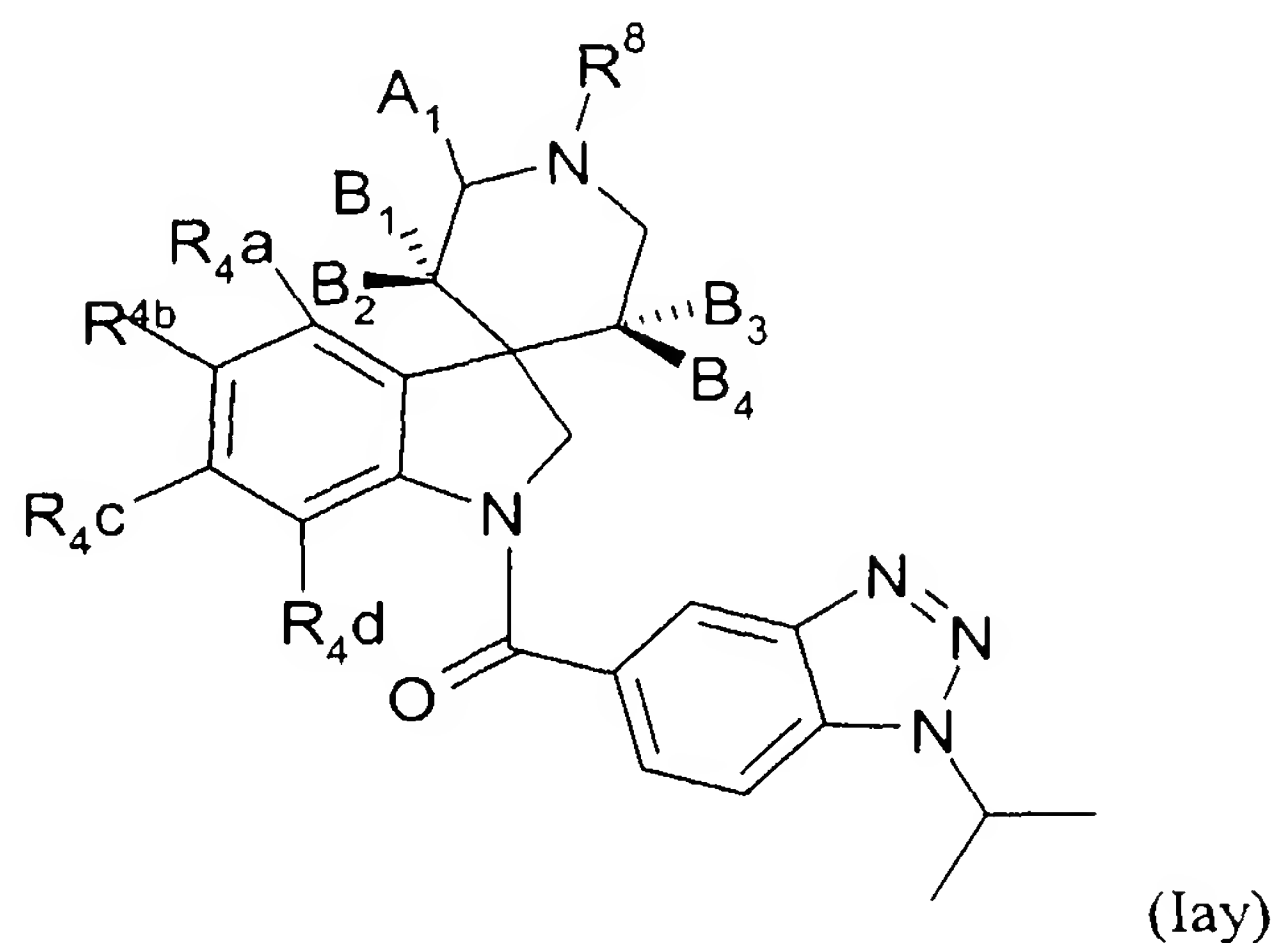
wherein A_1 is hydrogen, B_1 is CH_3 , B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table L provides 782 compounds of formula Iax



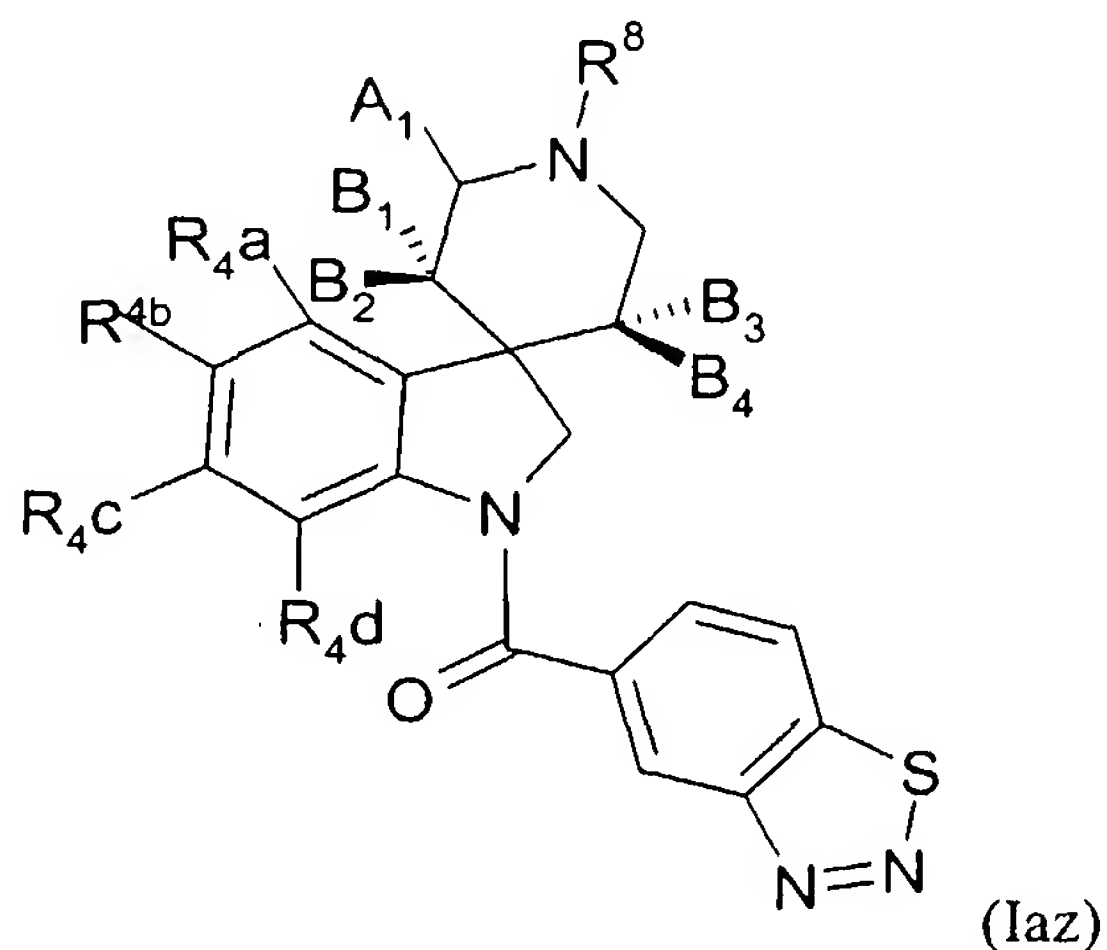
wherein A₁ is hydrogen, B₁ is CH₃, B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table LI provides 782 compounds of formula Iay



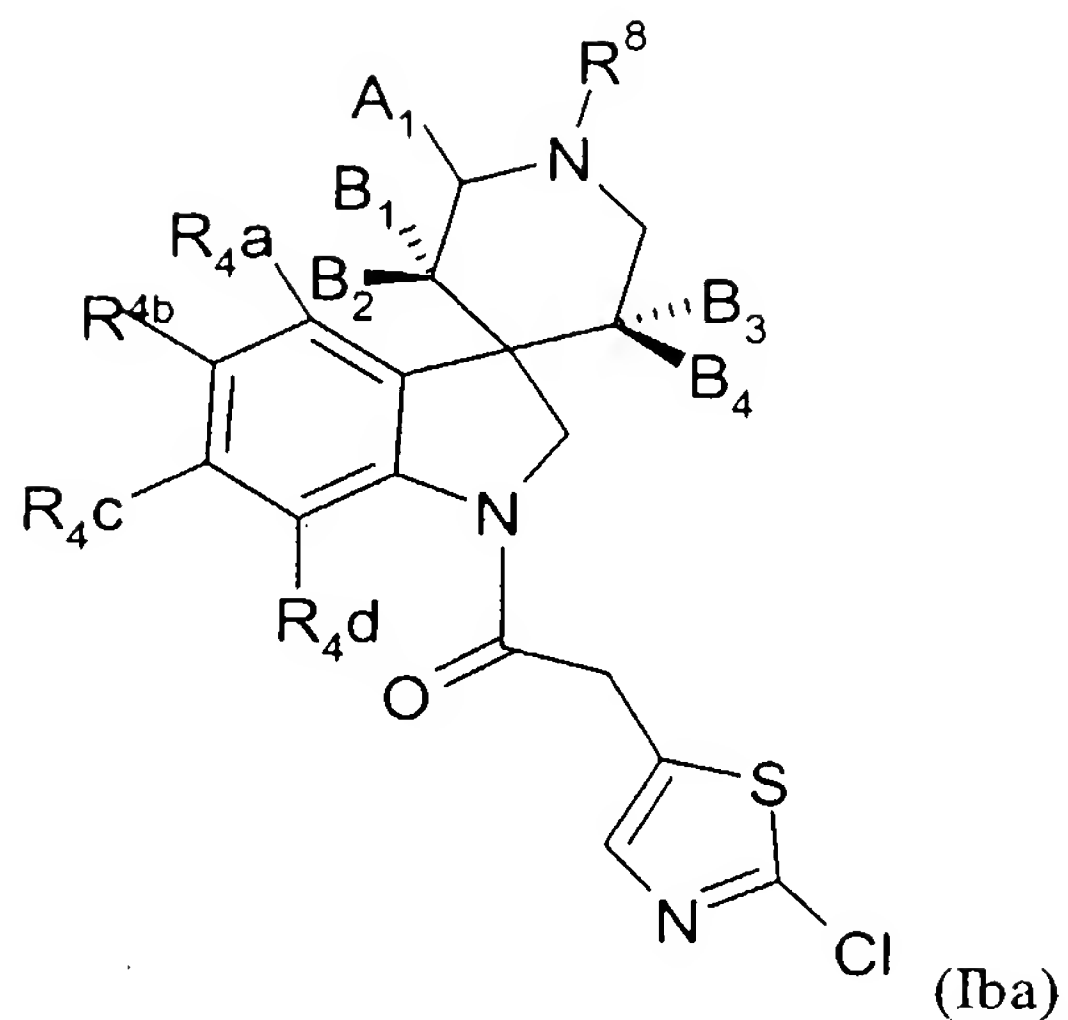
5 wherein A₁ is hydrogen, B₁ is CH₃, B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table LII provides 782 compounds of formula Ia2



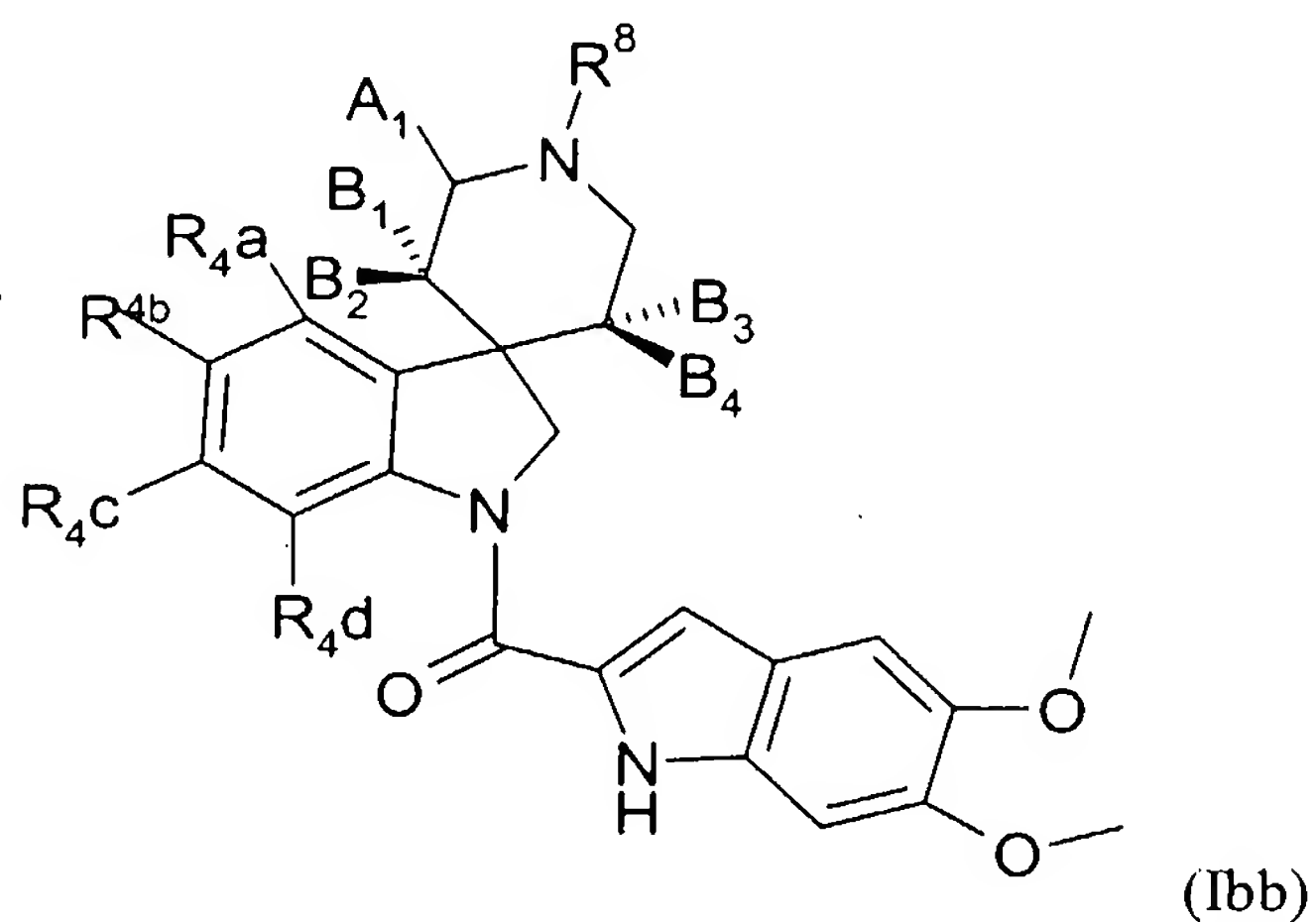
wherein A₁ is hydrogen, B₁ is CH₃, B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b},
10 R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table LIII provides 782 compounds of formula Iba



wherein A_1 is hydrogen, B_1 is CH_3 , B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

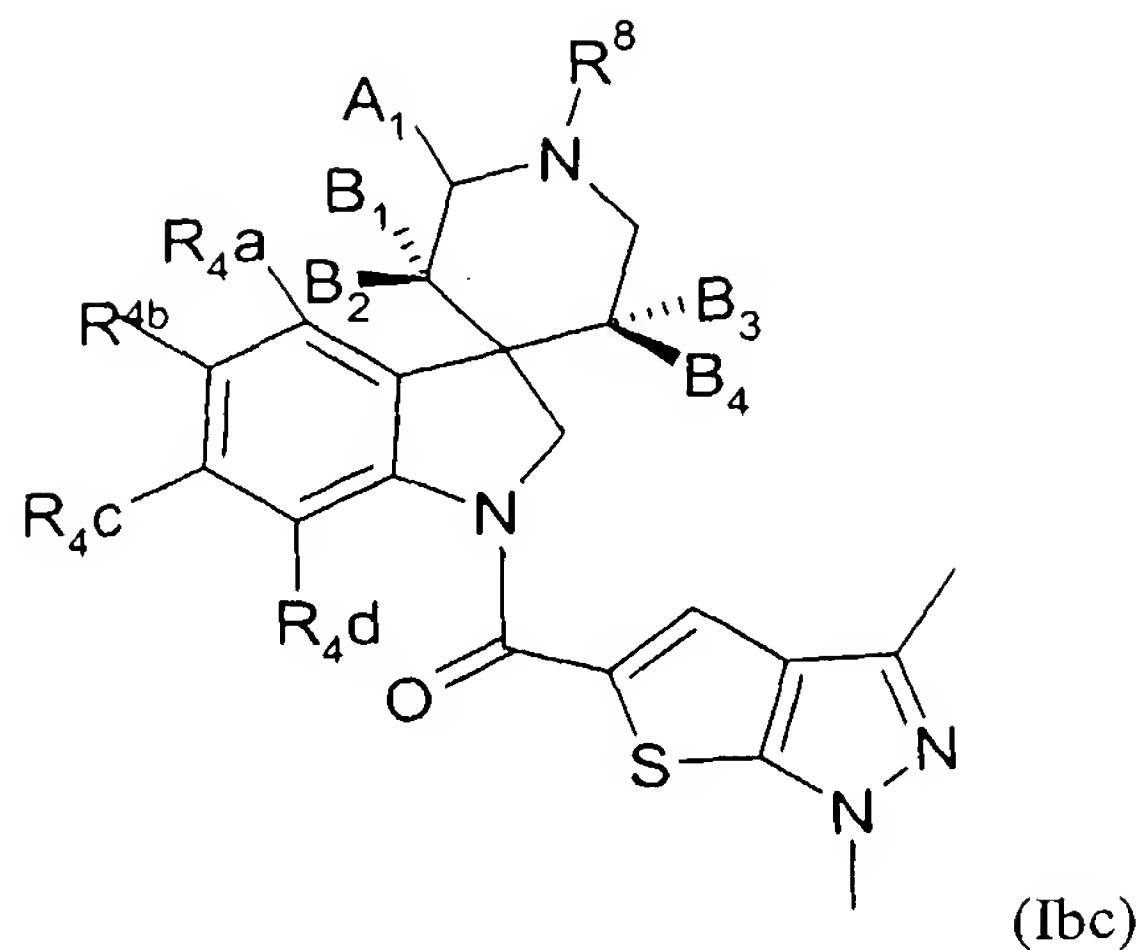
Table LIV provides 782 compounds of formula Ibb



wherein A_1 is hydrogen, B_1 is CH_3 , B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

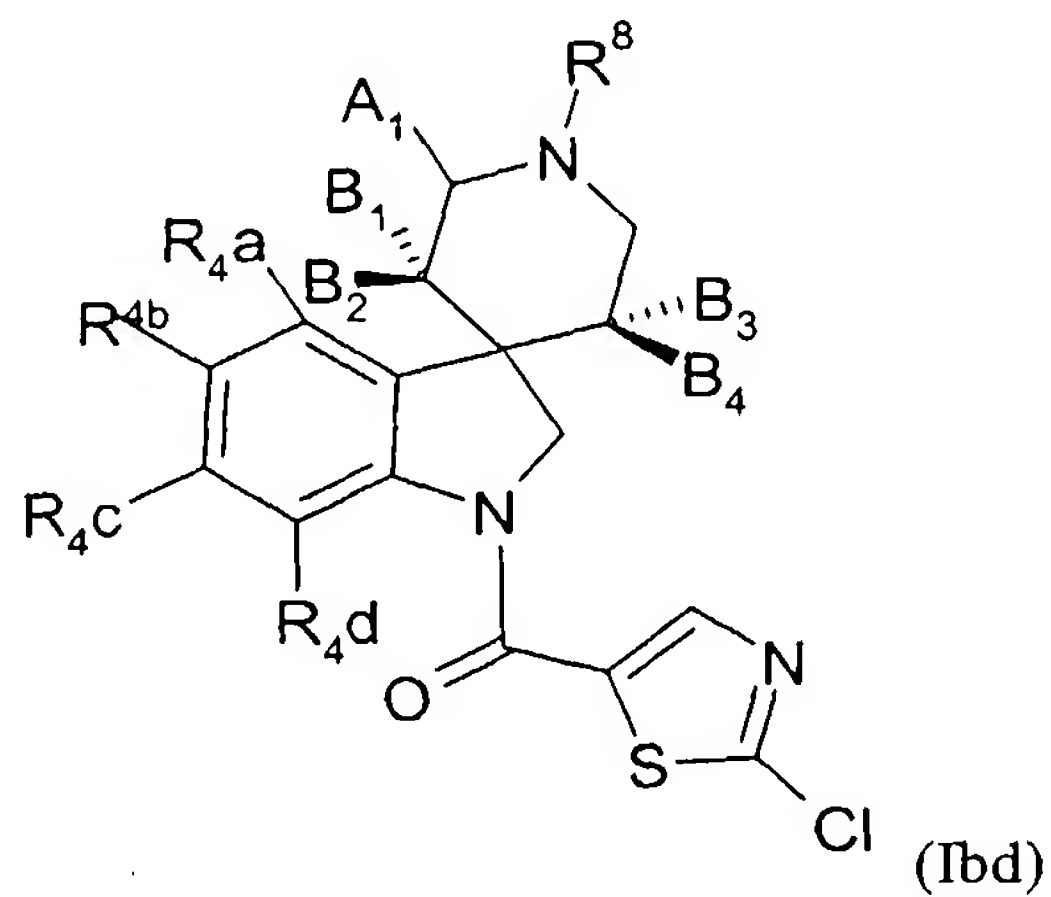
Table LV provides 782 compounds of formula Ibc

- 66 -



wherein A_1 is hydrogen, B_1 is CH_3 , B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table LVI provides 782 compounds of formula Ibd

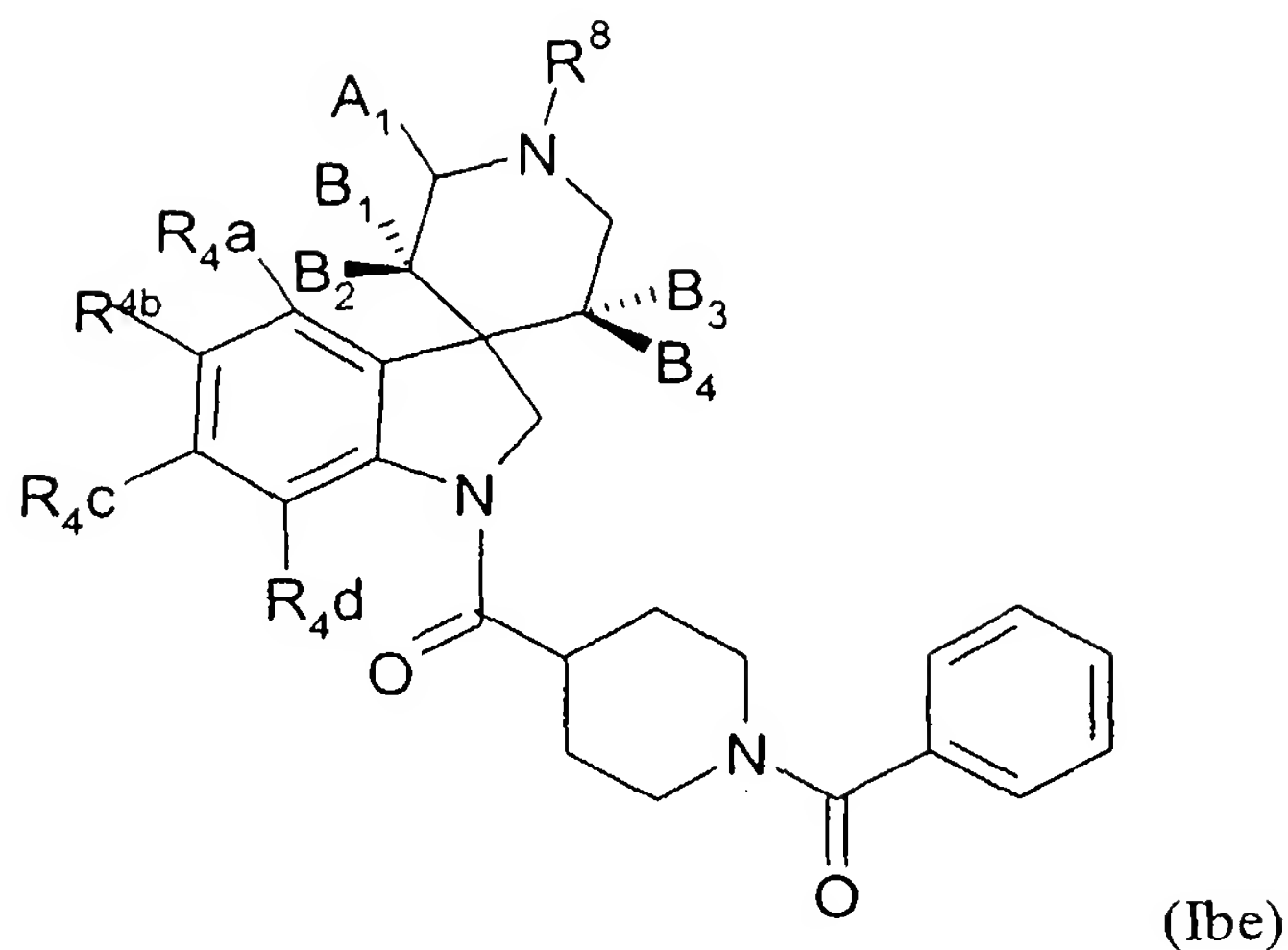


5

wherein A_1 is hydrogen, B_1 is CH_3 , B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

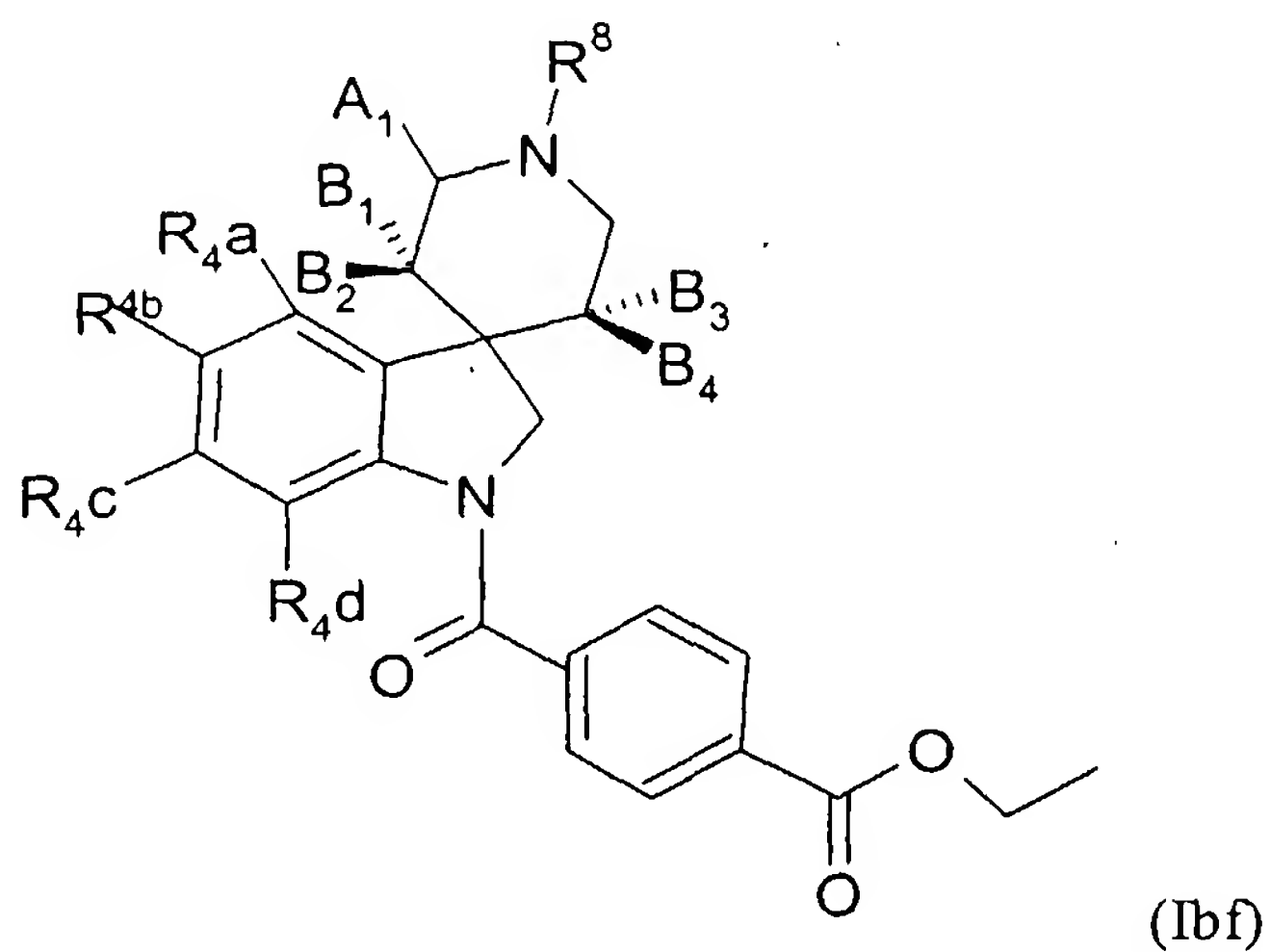
Table LVII provides 782 compounds of formula Ibe

- 67 -



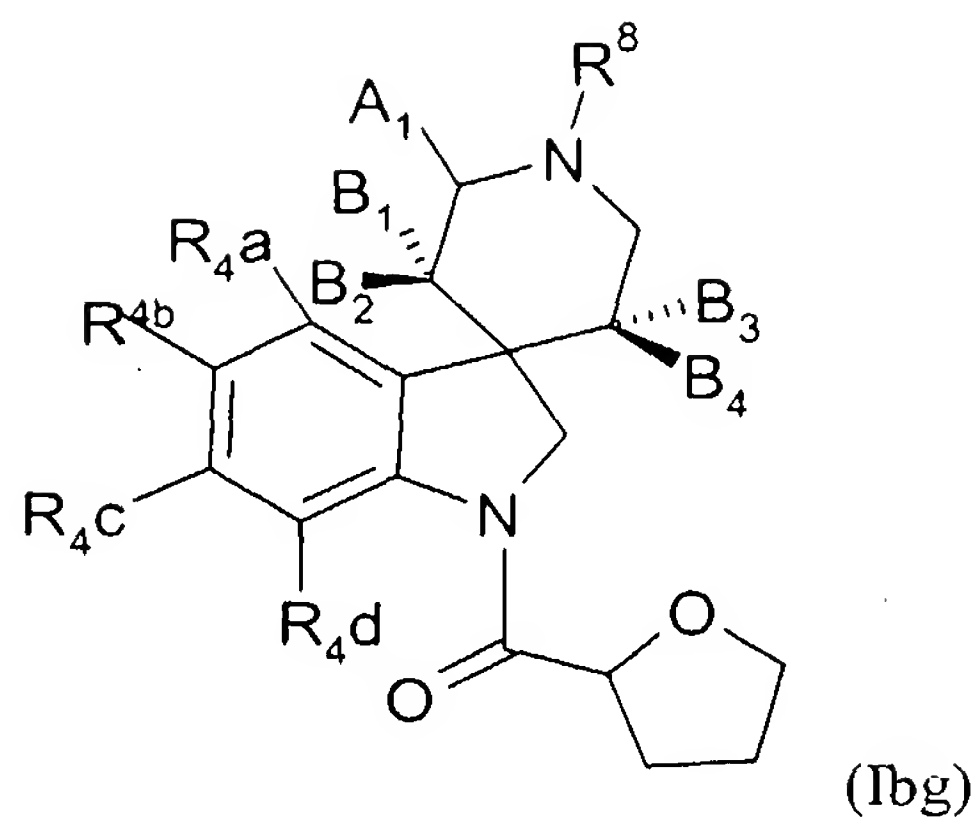
wherein A_1 is hydrogen, B_1 is CH_3 , B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table LVIII provides 782 compounds of formula Ibf



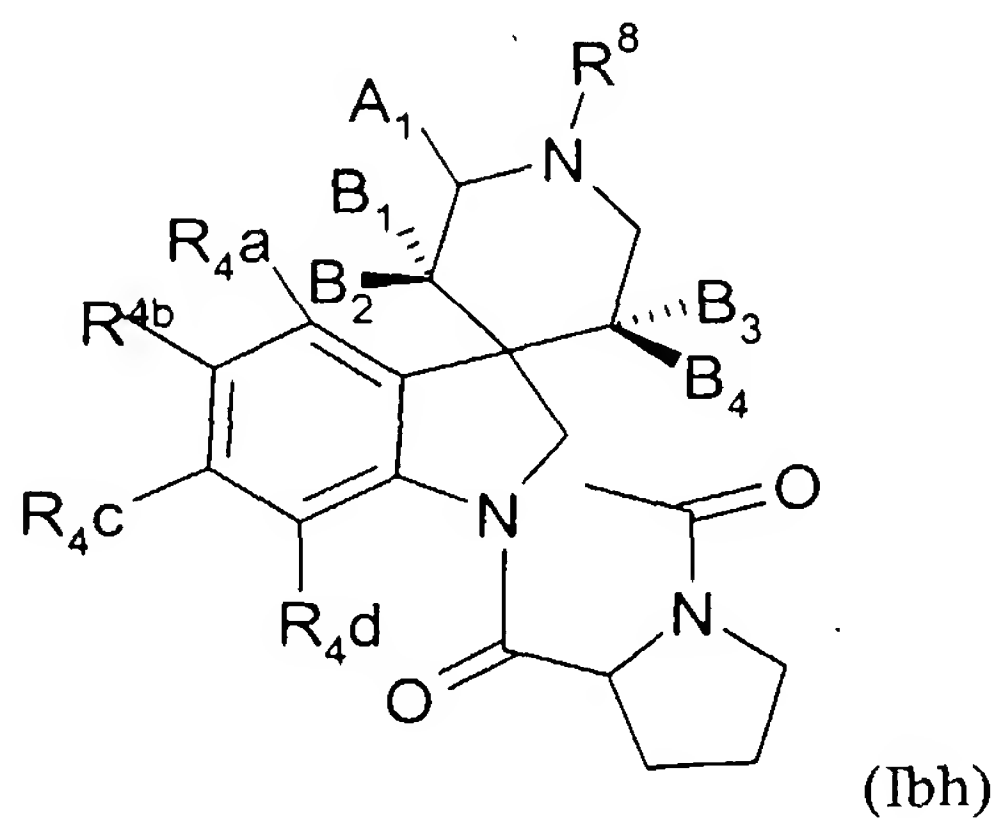
wherein A_1 is hydrogen, B_1 is CH_3 , B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table LLX provides 782 compounds of formula Ibg



wherein A_1 is hydrogen, B_1 is CH_3 , B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

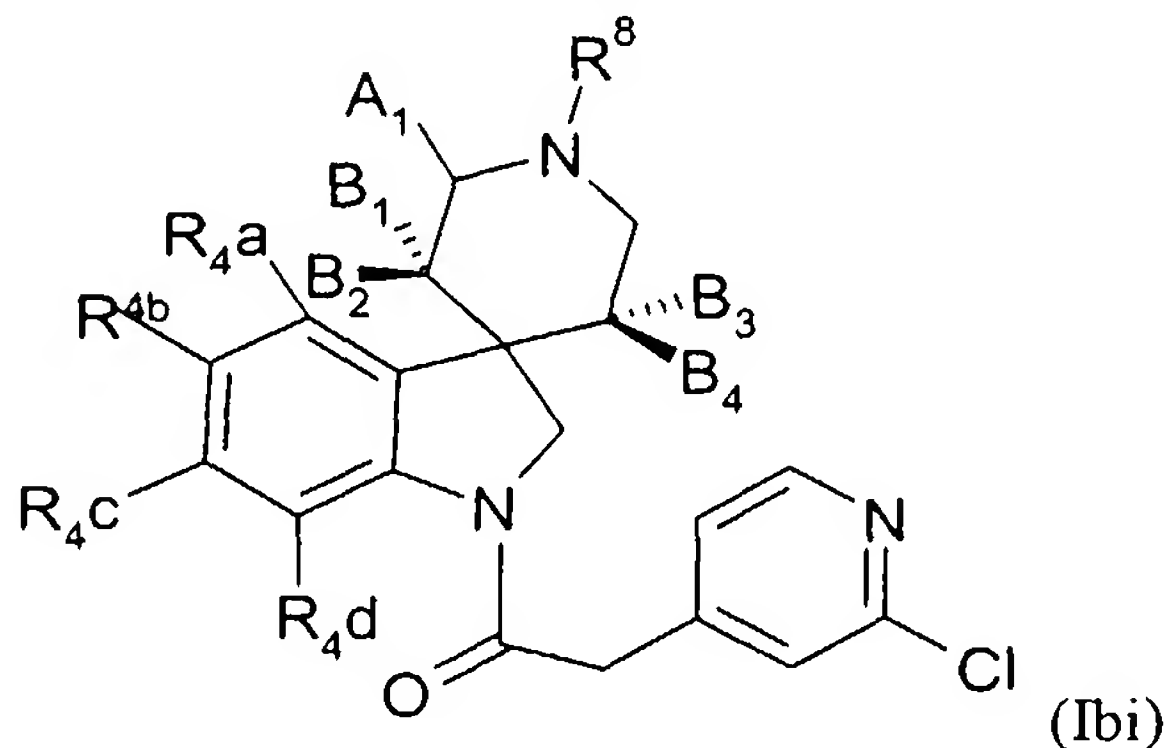
Table LX provides 782 compounds of formula Ibh



5

wherein A_1 is hydrogen, B_1 is CH_3 , B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

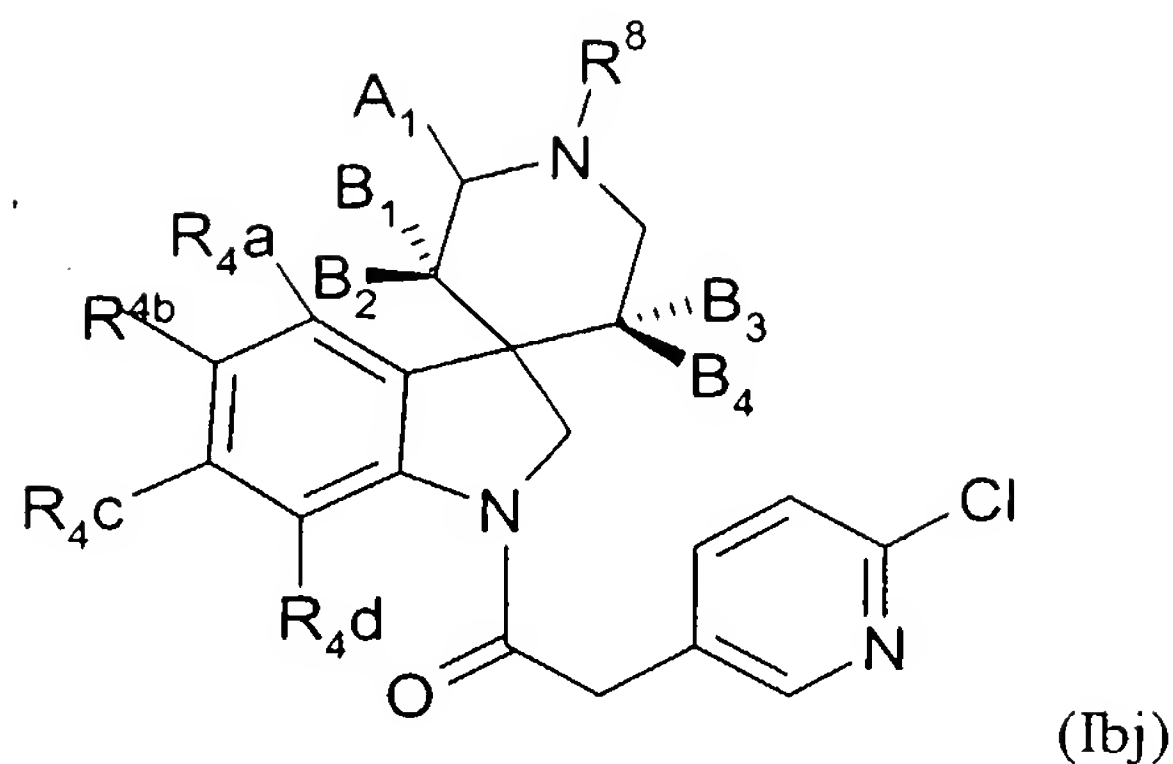
Table LXI provides 782 compounds of formula Ibi



10

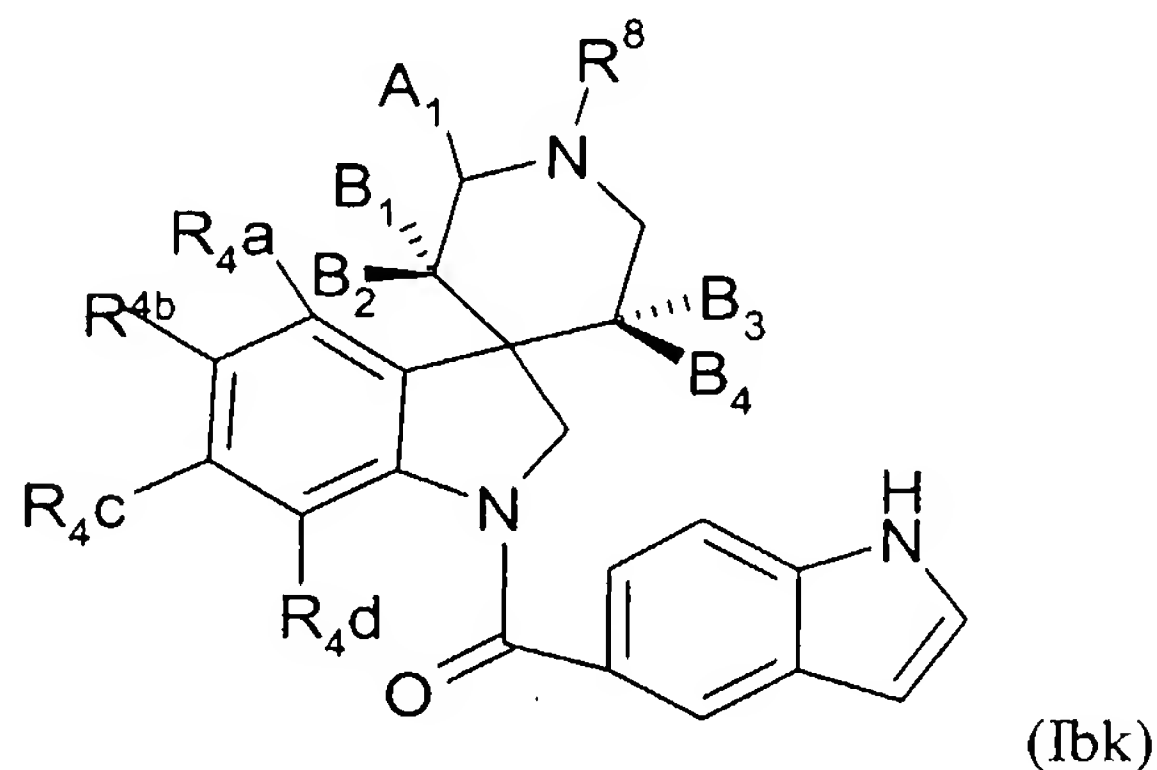
wherein A_1 is hydrogen, B_1 is CH_3 , B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table LXII provides 782 compounds of formula Ib j



wherein A_1 is hydrogen, B_1 is CH_3 , B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

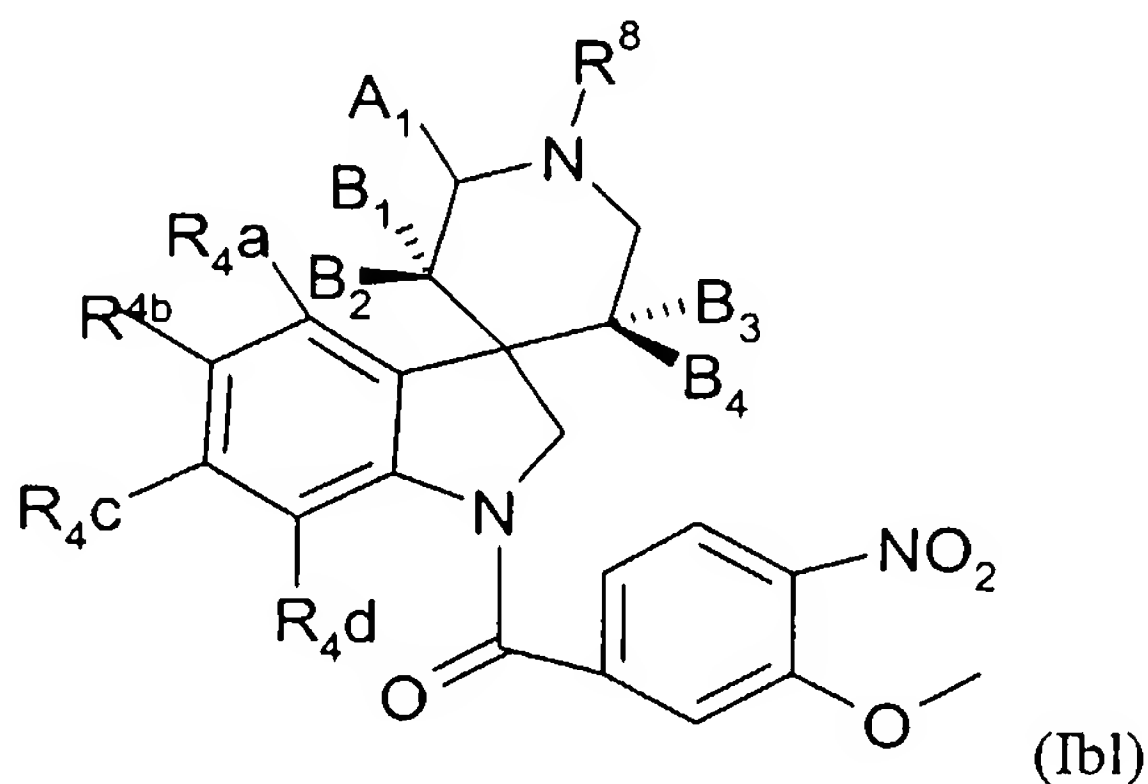
Table LXIII provides 782 compounds of formula Ibk



5

wherein A_1 is hydrogen, B_1 is CH_3 , B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table LXIV provides 782 compounds of formula Ibl

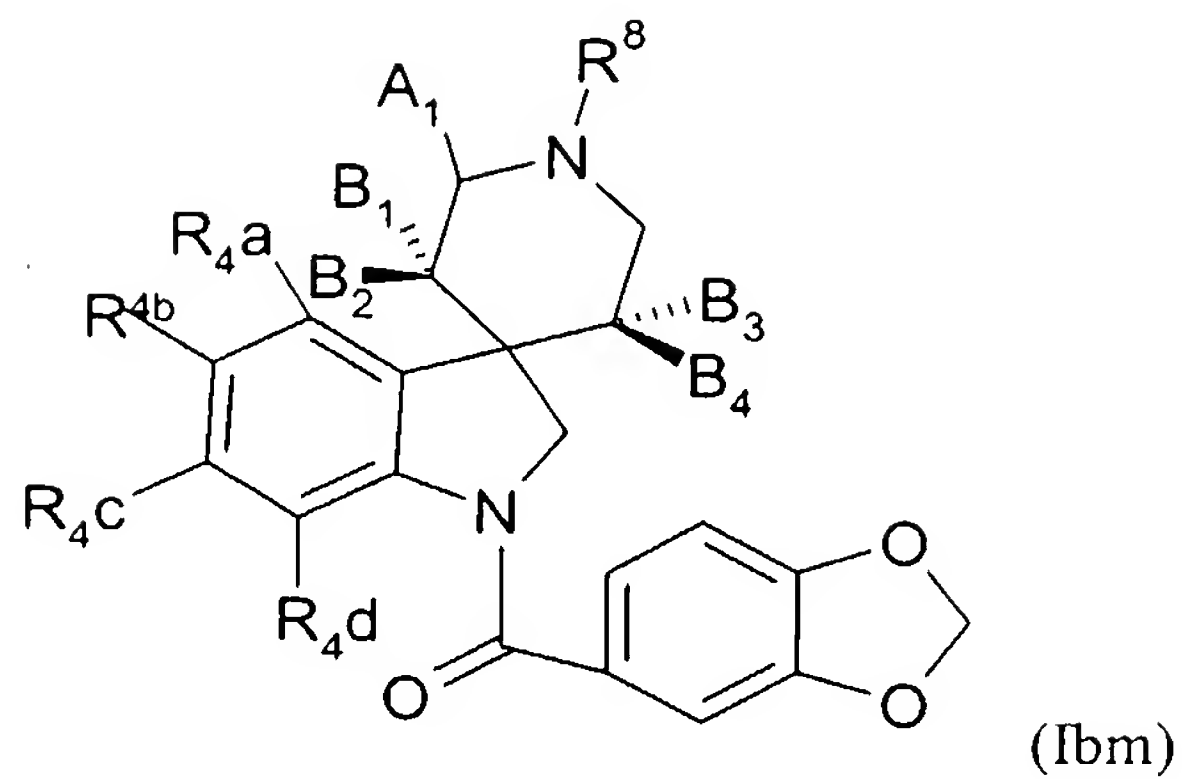


10

wherein A_1 is hydrogen, B_1 is CH_3 , B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

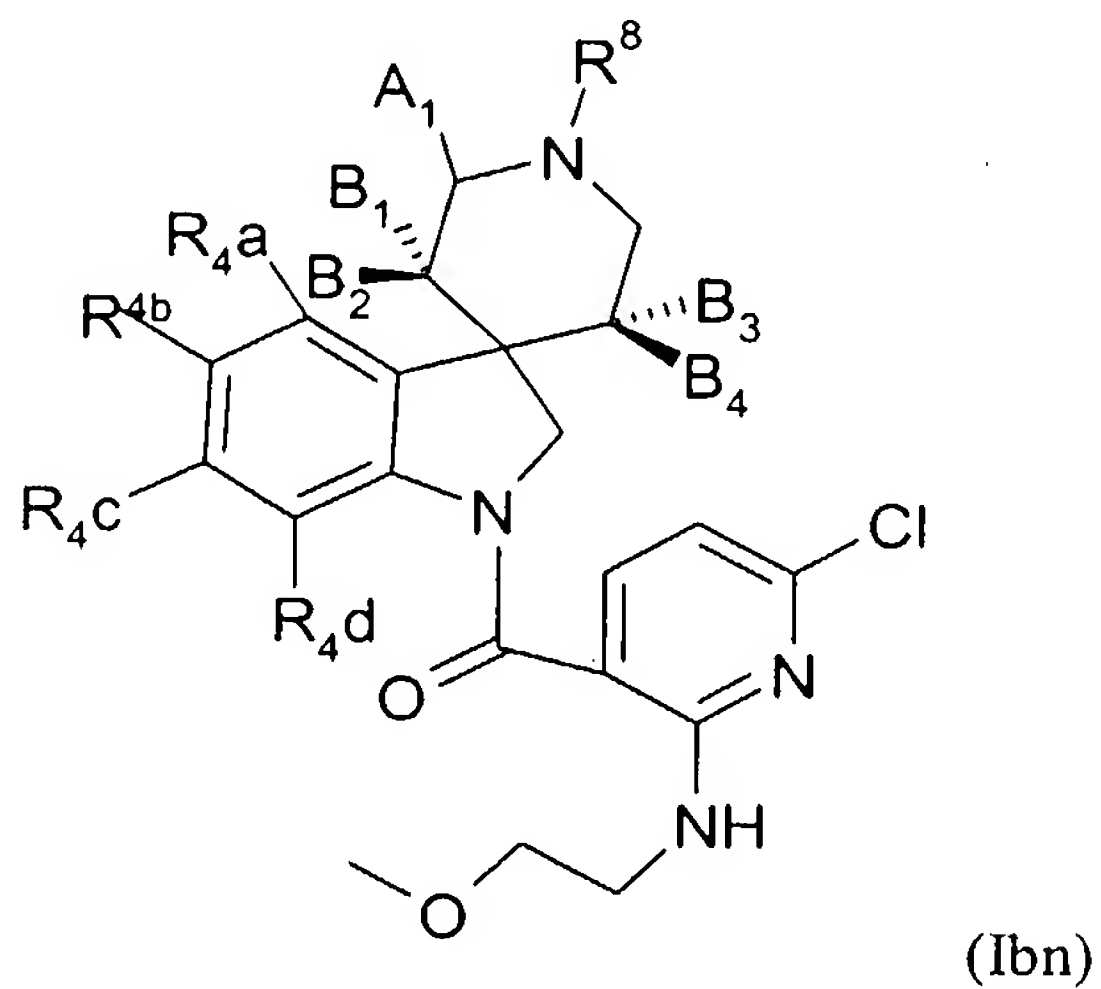
Table LXV provides 782 compounds of formula Ibm

- 70 -



wherein A_1 is hydrogen, B_1 is CH_3 , B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

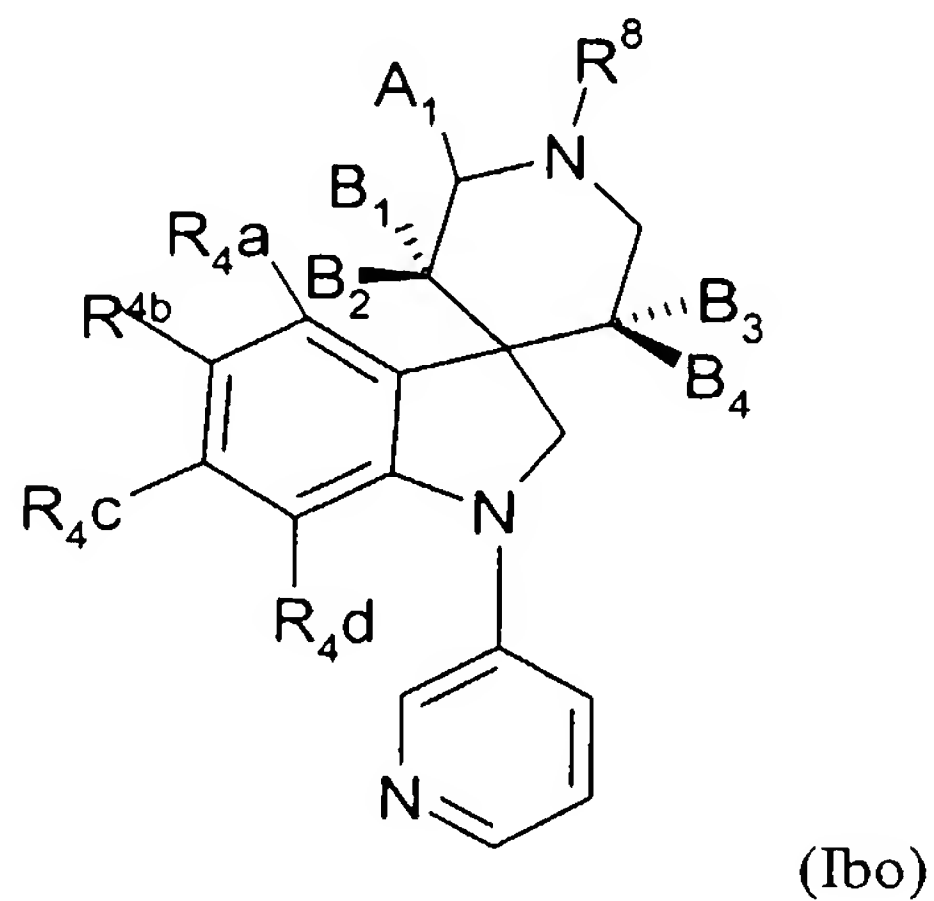
Table LXVI provides 782 compounds of formula Ibn



5

wherein A_1 is hydrogen, B_1 is CH_3 , B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table LXVII provides 782 compounds of formula Ibo



wherein A_1 is hydrogen, B_1 is CH_3 , B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CI provides 782 compounds of formula Ia wherein A_1 is hydrogen, B_1 is OH, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

5 Table CII provides 782 compounds of formula Ib wherein A_1 is hydrogen, B_1 is OH, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CIII provides 782 compounds of formula Ic wherein A_1 is hydrogen, B_1 is OH, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

10 Table CIV provides 782 compounds of formula Id wherein A_1 is hydrogen, B_1 is OH, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CV provides 782 compounds of formula Ie wherein A_1 is hydrogen, B_1 is OH, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CVI provides 782 compounds of formula If wherein A_1 is hydrogen, B_1 is OH, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

15 Table CVII provides 782 compounds of formula Ig wherein A_1 is hydrogen, B_1 is OH, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CVIII provides 782 compounds of formula Ih wherein A_1 is hydrogen, B_1 is OH, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

20 Table CLIX provides 782 compounds of formula Ii wherein A_1 is hydrogen, B_1 is OH, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CX provides 782 compounds of formula Ij wherein A_1 is hydrogen, B_1 is OH, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CXI provides 782 compounds of formula Ik wherein A_1 is hydrogen, B_1 is OH, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

25 Table CXII provides 782 compounds of formula Il wherein A_1 is hydrogen, B_1 is OH, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CXIII provides 782 compounds of formula Im wherein A_1 is hydrogen, B_1 is OH, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

30 Table CXIV provides 782 compounds of formula In wherein A_1 is hydrogen, B_1 is OH, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CXV provides 782 compounds of formula Io wherein A_1 is hydrogen, B_1 is OH, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CXVI provides 782 compounds of formula Ip wherein A₁ is hydrogen, B₁ is OH, B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CXVII provides 782 compounds of formula Iq wherein A₁ is hydrogen, B₁ is OH, B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

5 Table CXVIII provides 782 compounds of formula Ir wherein A₁ is hydrogen, B₁ is OH, B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CXIX provides 782 compounds of formula Is wherein A₁ is hydrogen, B₁ is OH, B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

10 Table CXX provides 782 compounds of formula It wherein A₁ is hydrogen, B₁ is OH, B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CXXI provides 782 compounds of formula Iu wherein A₁ is hydrogen, B₁ is OH, B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CXXII provides 782 compounds of formula Iv wherein A₁ is hydrogen, B₁ is OH, B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

15 Table CXXIII provides 782 compounds of formula Iw wherein A₁ is hydrogen, B₁ is OH, B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CXXIV provides 782 compounds of formula Ix wherein A₁ is hydrogen, B₁ is OH, B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

20 Table CXXV provides 782 compounds of formula Iy wherein A₁ is hydrogen, B₁ is OH, B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CXXVI provides 782 compounds of formula Iz wherein A₁ is hydrogen, B₁ is OH, B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CXXVII provides 782 compounds of formula Iaa wherein A₁ is hydrogen, B₁ is OH, B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

25 Table CXXVIII provides 782 compounds of formula Iab wherein A₁ is hydrogen, B₁ is OH, B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CXXIX provides 782 compounds of formula Iac wherein A₁ is hydrogen, B₁ is OH, B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

30 Table CXXX provides 782 compounds of formula Iad wherein A₁ is hydrogen, B₁ is OH, B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CXXXI provides 782 compounds of formula Iae wherein A₁ is hydrogen, B₁ is OH, B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

- Table CXXXII provides 782 compounds of formula Ia_f wherein A₁ is hydrogen, B₁ is OH, B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.
- Table CXXXIII provides 782 compounds of formula Ia_g wherein A₁ is hydrogen, B₁ is OH, B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.
- 5 Table CXXXIV provides 782 compounds of formula Ia_h wherein A₁ is hydrogen, B₁ is OH, B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.
- Table CXXXV provides 782 compounds of formula Ia_i wherein A₁ is hydrogen, B₁ is OH, B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.
- Table CXXXVI provides 782 compounds of formula Ia_j wherein A₁ is hydrogen, B₁ is OH,
10 B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.
- Table CXXXVII provides 782 compounds of formula Ia_k wherein A₁ is hydrogen, B₁ is OH, B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.
- Table CXXXVIII provides 782 compounds of formula Ia_l wherein A₁ is hydrogen, B₁ is OH, B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.
- 15 Table CXXXIX provides 782 compounds of formula Ia_m wherein A₁ is hydrogen, B₁ is OH, B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.
- Table CXL provides 782 compounds of formula Ia_n wherein A₁ is hydrogen, B₁ is OH, B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.
- Table CXLI provides 782 compounds of formula Ia_o wherein A₁ is hydrogen, B₁ is OH, B₂,
20 B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.
- Table CXLII provides 782 compounds of formula Ia_p wherein A₁ is hydrogen, B₁ is OH, B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.
- Table CXLIII provides 782 compounds of formula Ia_q wherein A₁ is hydrogen, B₁ is OH, B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.
- 25 Table CXLIV provides 782 compounds of formula Ia_r wherein A₁ is hydrogen, B₁ is OH, B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.
- Table CXLV provides 782 compounds of formula Ia_s wherein A₁ is hydrogen, B₁ is OH, B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.
- Table CXLVI provides 782 compounds of formula Ia_t wherein A₁ is hydrogen, B₁ is OH, B₂,
30 B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.
- Table CXLVII provides 782 compounds of formula Ia_u wherein A₁ is hydrogen, B₁ is OH, B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CXLVIII provides 782 compounds of formula Iav wherein A_1 is hydrogen, B_1 is OH, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CXLIX provides 782 compounds of formula Iaw wherein A_1 is hydrogen, B_1 is OH, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

5 Table CL provides 782 compounds of formula Iax wherein A_1 is hydrogen, B_1 is OH, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CLI provides 782 compounds of formula Iay wherein A_1 is hydrogen, B_1 is OH, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

10 Table CLII provides 782 compounds of formula Iaz wherein A_1 is hydrogen, B_1 is OH, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CLIII provides 782 compounds of formula Iba wherein A_1 is hydrogen, B_1 is OH, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CLIV provides 782 compounds of formula Ibb wherein A_1 is hydrogen, B_1 is OH, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

15 Table CLV provides 782 compounds of formula Ibc wherein A_1 is hydrogen, B_1 is OH, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CLVI provides 782 compounds of formula Ibd wherein A_1 is hydrogen, B_1 is OH, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

20 Table CLVII provides 782 compounds of formula Ibe wherein A_1 is hydrogen, B_1 is OH, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CLVIII provides 782 compounds of formula Ibf wherein A_1 is hydrogen, B_1 is OH, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CLIX provides 782 compounds of formula Ibg wherein A_1 is hydrogen, B_1 is OH, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

25 Table CLX provides 782 compounds of formula Ibh wherein A_1 is hydrogen, B_1 is OH, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CLXI provides 782 compounds of formula Ibi wherein A_1 is hydrogen, B_1 is OH, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

30 Table CLXII provides 782 compounds of formula Ibj wherein A_1 is hydrogen, B_1 is OH, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CLXIII provides 782 compounds of formula Ibk wherein A_1 is hydrogen, B_1 is OH, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CLXIV provides 782 compounds of formula Ibl wherein A_1 is hydrogen, B_1 is OH, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CLXV provides 782 compounds of formula Ibm wherein A_1 is hydrogen, B_1 is OH, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

5 Table CLXVI provides 782 compounds of formula Ibn wherein A_1 is hydrogen, B_1 is OH, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CLXVII provides 782 compounds of formula Ibo wherein A_1 is hydrogen, B_1 is OH, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

10 Table CCI provides 782 compounds of formula Ia wherein A_1 is hydrogen, B_1 is F, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CCII provides 782 compounds of formula Ib wherein A_1 is hydrogen, B_1 is F, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CCIII provides 782 compounds of formula Ic wherein A_1 is hydrogen, B_1 is F, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

15 Table CCIV provides 782 compounds of formula Id wherein A_1 is hydrogen, B_1 is F, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CCV provides 782 compounds of formula Ie wherein A_1 is hydrogen, B_1 is F, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

20 Table CCVI provides 782 compounds of formula If wherein A_1 is hydrogen, B_1 is F, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CCVII provides 782 compounds of formula Ig wherein A_1 is hydrogen, B_1 is F, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CCVIII provides 782 compounds of formula Ih wherein A_1 is hydrogen, B_1 is F, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

25 Table CCLIX provides 782 compounds of formula Ii wherein A_1 is hydrogen, B_1 is F, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CCX provides 782 compounds of formula Ij wherein A_1 is hydrogen, B_1 is F, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

30 Table CCXI provides 782 compounds of formula Ik wherein A_1 is hydrogen, B_1 is F, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CCXII provides 782 compounds of formula Il wherein A_1 is hydrogen, B_1 is F, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CCXIII provides 782 compounds of formula Im wherein A_1 is hydrogen, B_1 is F, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CCXIV provides 782 compounds of formula In wherein A_1 is hydrogen, B_1 is F, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

5 Table CCXV provides 782 compounds of formula Io wherein A_1 is hydrogen, B_1 is F, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CCXVI provides 782 compounds of formula Ip wherein A_1 is hydrogen, B_1 is F, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

10 Table CCXVII provides 782 compounds of formula Iq wherein A_1 is hydrogen, B_1 is F, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CCXVIII provides 782 compounds of formula Ir wherein A_1 is hydrogen, B_1 is F, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CCXIX provides 782 compounds of formula Is wherein A_1 is hydrogen, B_1 is F, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

15 Table CCXX provides 782 compounds of formula It wherein A_1 is hydrogen, B_1 is F, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CCXXI provides 782 compounds of formula Iu wherein A_1 is hydrogen, B_1 is F, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

20 Table CCXXII provides 782 compounds of formula Iv wherein A_1 is hydrogen, B_1 is F, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CCXXIII provides 782 compounds of formula Iw wherein A_1 is hydrogen, B_1 is F, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CCXXIV provides 782 compounds of formula Ix wherein A_1 is hydrogen, B_1 is F, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

25 Table CCXXV provides 782 compounds of formula Iy wherein A_1 is hydrogen, B_1 is F, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CCXXVI provides 782 compounds of formula Iz wherein A_1 is hydrogen, B_1 is F, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

30 Table CCXXVII provides 782 compounds of formula Iaa wherein A_1 is hydrogen, B_1 is F, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CCXXVIII provides 782 compounds of formula Iab wherein A_1 is hydrogen, B_1 is F, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CCXXIX provides 782 compounds of formula Iac wherein A_1 is hydrogen, B_1 is F, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CCXXX provides 782 compounds of formula Iad wherein A_1 is hydrogen, B_1 is F, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

5 Table CCXXXI provides 782 compounds of formula Iae wherein A_1 is hydrogen, B_1 is F, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CCXXXII provides 782 compounds of formula Iaf wherein A_1 is hydrogen, B_1 is F, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

10 Table CCXXXIII provides 782 compounds of formula Iag wherein A_1 is hydrogen, B_1 is F, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CCXXXIV provides 782 compounds of formula Iah wherein A_1 is hydrogen, B_1 is F, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CCXXXV provides 782 compounds of formula Iai wherein A_1 is hydrogen, B_1 is F, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

15 Table CCXXXVI provides 782 compounds of formula Iaj wherein A_1 is hydrogen, B_1 is F, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CCXXXVII provides 782 compounds of formula Iak wherein A_1 is hydrogen, B_1 is F, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

20 Table CCXXXVIII provides 782 compounds of formula Ial wherein A_1 is hydrogen, B_1 is F, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CCXXXIX provides 782 compounds of formula Iam wherein A_1 is hydrogen, B_1 is F, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CCXL provides 782 compounds of formula Ian wherein A_1 is hydrogen, B_1 is F, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

25 Table CCXLI provides 782 compounds of formula Iao wherein A_1 is hydrogen, B_1 is F, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CCXLII provides 782 compounds of formula Iap wherein A_1 is hydrogen, B_1 is F, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

30 Table CCXLIII provides 782 compounds of formula Iaq wherein A_1 is hydrogen, B_1 is F, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CCXLIV provides 782 compounds of formula Iar wherein A_1 is hydrogen, B_1 is F, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CCXLV provides 782 compounds of formula Ias wherein A_1 is hydrogen, B_1 is F, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CCXLVI provides 782 compounds of formula Iat wherein A_1 is hydrogen, B_1 is F, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

5 Table CCXLVII provides 782 compounds of formula Iau wherein A_1 is hydrogen, B_1 is F, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CCXLVIII provides 782 compounds of formula Iav wherein A_1 is hydrogen, B_1 is F, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

10 Table CCXLIX provides 782 compounds of formula Iaw wherein A_1 is hydrogen, B_1 is F, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CCL provides 782 compounds of formula Iax wherein A_1 is hydrogen, B_1 is F, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CCLI provides 782 compounds of formula Iay wherein A_1 is hydrogen, B_1 is F, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

15 Table CCLII provides 782 compounds of formula Iaz wherein A_1 is hydrogen, B_1 is F, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CCLIII provides 782 compounds of formula Iba wherein A_1 is hydrogen, B_1 is F, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

20 Table CCLIV provides 782 compounds of formula Ibb wherein A_1 is hydrogen, B_1 is F, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CCLV provides 782 compounds of formula Ibc wherein A_1 is hydrogen, B_1 is F, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CCLVI provides 782 compounds of formula Ibd wherein A_1 is hydrogen, B_1 is F, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

25 Table CCLVII provides 782 compounds of formula Ibe wherein A_1 is hydrogen, B_1 is F, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CCLVIII provides 782 compounds of formula Ibf wherein A_1 is hydrogen, B_1 is F, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

30 Table CCLIX provides 782 compounds of formula Ibg wherein A_1 is hydrogen, B_1 is F, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CCLX provides 782 compounds of formula Ibh wherein A_1 is hydrogen, B_1 is F, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CCLXI provides 782 compounds of formula Ibi wherein A_1 is hydrogen, B_1 is F, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CCLXII provides 782 compounds of formula Ib_j wherein A_1 is hydrogen, B_1 is F, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

5 Table CCLXIII provides 782 compounds of formula Ib_k wherein A_1 is hydrogen, B_1 is F, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CCLXIV provides 782 compounds of formula Ib_l wherein A_1 is hydrogen, B_1 is F, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

10 Table CCLXV provides 782 compounds of formula Ib_m wherein A_1 is hydrogen, B_1 is F, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CCLXVI provides 782 compounds of formula Ib_n wherein A_1 is hydrogen, B_1 is F, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CCLXVII provides 782 compounds of formula Ibo wherein A_1 is hydrogen, B_1 is F, B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

15 Table CCCI provides 782 compounds of formula Ia wherein A_1 is hydrogen, B_1 is F, B_2 is F, B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CCCII provides 782 compounds of formula Ib wherein A_1 is hydrogen, B_1 is F, B_2 is F, B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

20 Table CCCIII provides 782 compounds of formula Ic wherein A_1 is hydrogen, B_1 is F, B_2 is F, B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CCCIV provides 782 compounds of formula Id wherein A_1 is hydrogen, B_1 is F, B_2 is F, B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

25 Table CCCV provides 782 compounds of formula Ie wherein A_1 is hydrogen, B_1 is F, B_2 is F, B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CCCVI provides 782 compounds of formula If wherein A_1 is hydrogen, B_1 is F, B_2 is F, B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

30 Table CCCVII provides 782 compounds of formula Ig wherein A_1 is hydrogen, B_1 is F, B_2 is F, B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CCCVIII provides 782 compounds of formula Ih wherein A₁ is hydrogen, B₁ is F, B₂ is F, B₃ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CCCIX provides 782 compounds of formula Ii wherein A₁ is hydrogen, B₁ is F, B₂ is F, B₃ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CCCX provides 782 compounds of formula Ij wherein A₁ is hydrogen, B₁ is F, B₂ is F, B₃ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CCCXI provides 782 compounds of formula Ik wherein A₁ is hydrogen, B₁ is F, B₂ is F, B₃ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CCCXII provides 782 compounds of formula Il wherein A₁ is hydrogen, B₁ is F, B₂ is F, B₃ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CCCXIII provides 782 compounds of formula Im wherein A₁ is hydrogen, B₁ is F, B₂ is F, B₃ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CCCXIV provides 782 compounds of formula In wherein A₁ is hydrogen, B₁ is F, B₂ is F, B₃ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CCCXV provides 782 compounds of formula Io wherein A₁ is hydrogen, B₁ is F, B₂ is F, B₃ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CCCXVI provides 782 compounds of formula Ip wherein A₁ is hydrogen, B₁ is F, B₂ is F, B₃ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CCCXVII provides 782 compounds of formula Iq wherein A₁ is hydrogen, B₁ is F, B₂ is F, B₃ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CCCXVIII provides 782 compounds of formula Ir wherein A₁ is hydrogen, B₁ is F, B₂ is F, B₃ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CCCXIX provides 782 compounds of formula Is wherein A_1 is hydrogen, B_1 is F, B_2 is F, B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CCCXX provides 782 compounds of formula It wherein A_1 is hydrogen, B_1 is F, B_2 is F, B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CCCXXI provides 782 compounds of formula Iu wherein A_1 is hydrogen, B_1 is F, B_2 is F, B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CCCXXII provides 782 compounds of formula Iv wherein A_1 is hydrogen, B_1 is F, B_2 is F, B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CCCXXIII provides 782 compounds of formula Iw wherein A_1 is hydrogen, B_1 is F, B_2 is F, B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CCCXXIV provides 782 compounds of formula Ix wherein A_1 is hydrogen, B_1 is F, B_2 is F, B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CCCXXV provides 782 compounds of formula Iy wherein A_1 is hydrogen, B_1 is F, B_2 is F, B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CCCXXVI provides 782 compounds of formula Iz wherein A_1 is hydrogen, B_1 is F, B_2 is F, B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CCCXXVII provides 782 compounds of formula Iaa wherein A_1 is hydrogen, B_1 is F, B_2 is F, B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CCCXXVIII provides 782 compounds of formula Iab wherein A_1 is hydrogen, B_1 is F, B_2 is F, B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CCCXXIX provides 782 compounds of formula Iac wherein A_1 is hydrogen, B_1 is F, B_2 is F, B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CCCXXX provides 782 compounds of formula Iad wherein A_1 is hydrogen, B_1 is F, B_2 is F, B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CCCXXXI provides 782 compounds of formula Iae wherein A_1 is hydrogen, B_1 is F, B_2 is F, B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CCCXXXII provides 782 compounds of formula Iaf wherein A_1 is hydrogen, B_1 is F, B_2 is F, B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CCCXXXIII provides 782 compounds of formula Iag wherein A_1 is hydrogen, B_1 is F, B_2 is F, B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CCCXXXIV provides 782 compounds of formula Iah wherein A_1 is hydrogen, B_1 is F, B_2 is F, B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CCCXXXV provides 782 compounds of formula Iai wherein A_1 is hydrogen, B_1 is F, B_2 is F, B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CCCXXXVI provides 782 compounds of formula Iaj wherein A_1 is hydrogen, B_1 is F, B_2 is F, B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CCCXXXVII provides 782 compounds of formula Iak wherein A_1 is hydrogen, B_1 is F, B_2 is F, B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CCCXXXVIII provides 782 compounds of formula Ial wherein A_1 is hydrogen, B_1 is F, B_2 is F, B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CCCXXXIX provides 782 compounds of formula Iam wherein A₁ is hydrogen, B₁ is F, B₂ is F, B₃ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CCCXL provides 782 compounds of formula Ian wherein A₁ is hydrogen, B₁ is F, B₂ is F, B₃ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CCCXLI provides 782 compounds of formula Iao wherein A₁ is hydrogen, B₁ is F, B₂ is F, B₃ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CCCXLII provides 782 compounds of formula Iap wherein A₁ is hydrogen, B₁ is F, B₂ is F, B₃ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CCCXLIII provides 782 compounds of formula Iaq wherein A₁ is hydrogen, B₁ is F, B₂ is F, B₃ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CCCXLIV provides 782 compounds of formula Iar wherein A₁ is hydrogen, B₁ is F, B₂ is F, B₃ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CCCXLV provides 782 compounds of formula Ias wherein A₁ is hydrogen, B₁ is F, B₂ is F, B₃ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CCCXLVI provides 782 compounds of formula Iat wherein A₁ is hydrogen, B₁ is F, B₂ is F, B₃ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CCCXLVII provides 782 compounds of formula Iau wherein A₁ is hydrogen, B₁ is F, B₂ is F, B₃ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CCCXLVIII provides 782 compounds of formula Iav wherein A₁ is hydrogen, B₁ is F, B₂ is F, B₃ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CCCXLIX provides 782 compounds of formula Ia_w wherein A₁ is hydrogen, B₁ is F, B₂ is F, B₃ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CCCL provides 782 compounds of formula Ia_x wherein A₁ is hydrogen, B₁ is F, B₂ is F, B₃ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CCCLI provides 782 compounds of formula Ia_y wherein A₁ is hydrogen, B₁ is F, B₂ is F, B₃ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CCCLII provides 782 compounds of formula Ia_z wherein A₁ is hydrogen, B₁ is F, B₂ is F, B₃ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CCCLIII provides 782 compounds of formula Iba wherein A₁ is hydrogen, B₁ is F, B₂ is F, B₃ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CCCLIV provides 782 compounds of formula Ibb wherein A₁ is hydrogen, B₁ is F, B₂ is F, B₃ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CCCLV provides 782 compounds of formula Ibc wherein A₁ is hydrogen, B₁ is F, B₂ is F, B₃ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CCCLVI provides 782 compounds of formula Ibd wherein A₁ is hydrogen, B₁ is F, B₂ is F, B₃ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CCCLVII provides 782 compounds of formula Ibe wherein A₁ is hydrogen, B₁ is F, B₂ is F, B₃ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CCCLVIII provides 782 compounds of formula Ibf wherein A₁ is hydrogen, B₁ is F, B₂ is F, B₃ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in

Table 1.

Table CCCLIX provides 782 compounds of formula Ibg wherein A_1 is hydrogen, B_1 is F, B_2 is F, B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CCCLX provides 782 compounds of formula Ibh wherein A_1 is hydrogen, B_1 is F, B_2 is F, B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CCCLXI provides 782 compounds of formula Ibi wherein A_1 is hydrogen, B_1 is F, B_2 is F, B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CCCLXII provides 782 compounds of formula Ibj wherein A_1 is hydrogen, B_1 is F, B_2 is F, B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CCCLXIII provides 782 compounds of formula Ibk wherein A_1 is hydrogen, B_1 is F, B_2 is F, B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CCCLXIV provides 782 compounds of formula Ibl wherein A_1 is hydrogen, B_1 is F, B_2 is F, B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CCCLXV provides 782 compounds of formula Ibm wherein A_1 is hydrogen, B_1 is F, B_2 is F, B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CCCLXVI provides 782 compounds of formula Ibn wherein A_1 is hydrogen, B_1 is F, B_2 is F, B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CCCLXVII provides 782 compounds of formula Ibo wherein A_1 is hydrogen, B_1 is F, B_2 is F, B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CDI provides 782 compounds of formula Ia wherein A_1 is hydrogen, B_1 is CH_3 , B_2 is CH_3 , B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in

Table 1.

Table CDII provides 782 compounds of formula Ib wherein A₁ is hydrogen, B₁ is CH₃, B₂ is CH₃, B₃ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CDIII provides 782 compounds of formula Ic wherein A₁ is hydrogen, B₁ is CH₃, B₂ is CH₃, B₃ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CDIV provides 782 compounds of formula Id wherein A₁ is hydrogen, B₁ is CH₃, B₂ is CH₃, B₃ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CDV provides 782 compounds of formula Ie wherein A₁ is hydrogen, B₁ is CH₃, B₂ is CH₃, B₃ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CDVI provides 782 compounds of formula If wherein A₁ is hydrogen, B₁ is CH₃, B₂ is CH₃, B₃ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CDVII provides 782 compounds of formula Ig wherein A₁ is hydrogen, B₁ is CH₃, B₂ is CH₃, B₃ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CDVIII provides 782 compounds of formula Ih wherein A₁ is hydrogen, B₁ is CH₃, B₂ is CH₃, B₃ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CDIX provides 782 compounds of formula Ii wherein A₁ is hydrogen, B₁ is CH₃, B₂ is CH₃, B₃ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CDX provides 782 compounds of formula Ij wherein A₁ is hydrogen, B₁ is CH₃, B₂ is CH₃, B₃ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CDXI provides 782 compounds of formula Ik wherein A₁ is hydrogen, B₁ is CH₃, B₂ is CH₃, B₃ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CDXII provides 782 compounds of formula II wherein A_1 is hydrogen, B_1 is CH_3 , B_2 is CH_3 , B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CDXIII provides 782 compounds of formula Im wherein A_1 is hydrogen, B_1 is CH_3 , B_2 is CH_3 , B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CDXIV provides 782 compounds of formula In wherein A_1 is hydrogen, B_1 is CH_3 , B_2 is CH_3 , B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CDXV provides 782 compounds of formula Io wherein A_1 is hydrogen, B_1 is CH_3 , B_2 is CH_3 , B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CDXVI provides 782 compounds of formula Ip wherein A_1 is hydrogen, B_1 is CH_3 , B_2 is CH_3 , B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CDXVII provides 782 compounds of formula Iq wherein A_1 is hydrogen, B_1 is CH_3 , B_2 is CH_3 , B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CDXVIII provides 782 compounds of formula Ir wherein A_1 is hydrogen, B_1 is CH_3 , B_2 is CH_3 , B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CDXIX provides 782 compounds of formula Is wherein A_1 is hydrogen, B_1 is CH_3 , B_2 is CH_3 , B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CDXX provides 782 compounds of formula It wherein A_1 is hydrogen, B_1 is CH_3 , B_2 is CH_3 , B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CDXXI provides 782 compounds of formula Iu wherein A_1 is hydrogen, B_1 is CH_3 , B_2 is CH_3 , B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CDXXII provides 782 compounds of formula Iv wherein A_1 is hydrogen, B_1 is CH_3 , B_2 is CH_3 , B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

5 Table CDXXIII provides 782 compounds of formula Iw wherein A_1 is hydrogen, B_1 is CH_3 , B_2 is CH_3 , B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CDXXIV provides 782 compounds of formula Ix wherein A_1 is hydrogen, B_1 is CH_3 , B_2 is CH_3 , B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

10 Table CDXXV provides 782 compounds of formula Iy wherein A_1 is hydrogen, B_1 is CH_3 , B_2 is CH_3 , B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CDXXVI provides 782 compounds of formula Iz wherein A_1 is hydrogen, B_1 is CH_3 , B_2 is CH_3 , B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in
15 Table 1.

Table CDXXVII provides 782 compounds of formula Iaa wherein A_1 is hydrogen, B_1 is CH_3 , B_2 is CH_3 , B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CDXXVIII provides 782 compounds of formula Iab wherein A_1 is hydrogen, B_1 is
20 CH_3 , B_2 is CH_3 , B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CDXXIX provides 782 compounds of formula Iac wherein A_1 is hydrogen, B_1 is CH_3 , B_2 is CH_3 , B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

25 Table CDXXX provides 782 compounds of formula Iad wherein A_1 is hydrogen, B_1 is CH_3 , B_2 is CH_3 , B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CDXXXI provides 782 compounds of formula Iae wherein A_1 is hydrogen, B_1 is CH_3 , B_2 is CH_3 , B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in
30 Table 1.

Table CDXXXII provides 782 compounds of formula Ia_f wherein A₁ is hydrogen, B₁ is CH₃, B₂ is CH₃, B₃ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CDXXXIII provides 782 compounds of formula Ia_g wherein A₁ is hydrogen, B₁ is CH₃, B₂ is CH₃, B₃ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CDXXXIV provides 782 compounds of formula Ia_h wherein A₁ is hydrogen, B₁ is CH₃, B₂ is CH₃, B₃ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CDXXXV provides 782 compounds of formula Ia_i wherein A₁ is hydrogen, B₁ is CH₃, B₂ is CH₃, B₃ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CDXXXVI provides 782 compounds of formula Ia_j wherein A₁ is hydrogen, B₁ is CH₃, B₂ is CH₃, B₃ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CDXXXVII provides 782 compounds of formula Ia_k wherein A₁ is hydrogen, B₁ is CH₃, B₂ is CH₃, B₃ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CDXXXVIII provides 782 compounds of formula Ia_l wherein A₁ is hydrogen, B₁ is CH₃, B₂ is CH₃, B₃ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CDXXXIX provides 782 compounds of formula Ia_m wherein A₁ is hydrogen, B₁ is CH₃, B₂ is CH₃, B₃ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CDXL provides 782 compounds of formula Ia_n wherein A₁ is hydrogen, B₁ is CH₃, B₂ is CH₃, B₃ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CDXLI provides 782 compounds of formula Ia_o wherein A₁ is hydrogen, B₁ is CH₃, B₂ is CH₃, B₃ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CDXLII provides 782 compounds of formula Iap wherein A_1 is hydrogen, B_1 is CH_3 , B_2 is CH_3 , B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CDXLIII provides 782 compounds of formula Ia_q wherein A_1 is hydrogen, B_1 is CH_3 ,
5 B_2 is CH_3 , B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CDXLIV provides 782 compounds of formula Iar wherein A_1 is hydrogen, B_1 is CH_3 , B_2 is CH_3 , B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

10 Table CDXLV provides 782 compounds of formula Ias wherein A_1 is hydrogen, B_1 is CH_3 , B_2 is CH_3 , B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CDXLVI provides 782 compounds of formula Iat wherein A_1 is hydrogen, B_1 is CH_3 , B_2 is CH_3 , B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in
15 Table 1.

Table CDXLVII provides 782 compounds of formula Iau wherein A_1 is hydrogen, B_1 is CH_3 , B_2 is CH_3 , B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CDXLVIII provides 782 compounds of formula Iav wherein A_1 is hydrogen, B_1 is
20 CH_3 , B_2 is CH_3 , B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CDXLIX provides 782 compounds of formula Iaw wherein A_1 is hydrogen, B_1 is CH_3 , B_2 is CH_3 , B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

25 Table CDL provides 782 compounds of formula Iax wherein A_1 is hydrogen, B_1 is CH_3 , B_2 is CH_3 , B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CDLI provides 782 compounds of formula Iay wherein A_1 is hydrogen, B_1 is CH_3 , B_2 is CH_3 , B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in
30 Table 1.

Table CDLII provides 782 compounds of formula Iaz wherein A_1 is hydrogen, B_1 is CH_3 , B_2 is CH_3 , B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CDLIII provides 782 compounds of formula Iba wherein A_1 is hydrogen, B_1 is CH_3 , B_2 is CH_3 , B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CDLIV provides 782 compounds of formula Ibb wherein A_1 is hydrogen, B_1 is CH_3 , B_2 is CH_3 , B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CDLV provides 782 compounds of formula Ibc wherein A_1 is hydrogen, B_1 is CH_3 , B_2 is CH_3 , B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CDLVI provides 782 compounds of formula Ibd wherein A_1 is hydrogen, B_1 is CH_3 , B_2 is CH_3 , B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CDLVII provides 782 compounds of formula Ibe wherein A_1 is hydrogen, B_1 is CH_3 , B_2 is CH_3 , B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CDLVIII provides 782 compounds of formula Ibf wherein A_1 is hydrogen, B_1 is CH_3 , B_2 is CH_3 , B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CDLIX provides 782 compounds of formula Ibg wherein A_1 is hydrogen, B_1 is CH_3 , B_2 is CH_3 , B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CDLX provides 782 compounds of formula Ibh wherein A_1 is hydrogen, B_1 is CH_3 , B_2 is CH_3 , B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CDLXI provides 782 compounds of formula Ibi wherein A_1 is hydrogen, B_1 is CH_3 , B_2 is CH_3 , B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CDLXII provides 782 compounds of formula Ib_j wherein A₁ is hydrogen, B₁ is CH₃, B₂ is CH₃, B₃ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CDLXIII provides 782 compounds of formula Ib_k wherein A₁ is hydrogen, B₁ is CH₃,
5 B₂ is CH₃, B₃ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CDLXIV provides 782 compounds of formula Ib_l wherein A₁ is hydrogen, B₁ is CH₃, B₂ is CH₃, B₃ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

10 Table CDLXV provides 782 compounds of formula Ib_m wherein A₁ is hydrogen, B₁ is CH₃, B₂ is CH₃, B₃ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CDLXVI provides 782 compounds of formula Ib_n wherein A₁ is hydrogen, B₁ is CH₃, B₂ is CH₃, B₃ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in
15 Table 1.

Table CDLXVII provides 782 compounds of formula Ib_o wherein A₁ is hydrogen, B₁ is CH₃, B₂ is CH₃, B₃ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table DI provides 782 compounds of formula Ia wherein A₁ is hydrogen, B₁ and B₃ are both
20 CH₃, and B₂ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table DII provides 782 compounds of formula Ib wherein A₁ is hydrogen, B₁ and B₃ are both CH₃, and B₂ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

25 Table DIII provides 782 compounds of formula Ic wherein A₁ is hydrogen, B₁ and B₃ are both CH₃, and B₂ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table DIV provides 782 compounds of formula Id wherein A₁ is hydrogen, B₁ and B₃ are both CH₃, and B₂ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are
30 given in Table 1.

Table DV provides 782 compounds of formula Ie wherein A_1 is hydrogen, B_1 and B_3 are both CH_3 , and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DVI provides 782 compounds of formula If wherein A_1 is hydrogen, B_1 and B_3 are both CH_3 , and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DVII provides 782 compounds of formula Ig wherein A_1 is hydrogen, B_1 and B_3 are both CH_3 , and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DVIII provides 782 compounds of formula Ih wherein A_1 is hydrogen, B_1 and B_3 are both CH_3 , and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DIX provides 782 compounds of formula Ii wherein A_1 is hydrogen, B_1 and B_3 are both CH_3 , and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DX provides 782 compounds of formula Ij wherein A_1 is hydrogen, B_1 and B_3 are both CH_3 , and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DXI provides 782 compounds of formula Ik wherein A_1 is hydrogen, B_1 and B_3 are both CH_3 , and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DXII provides 782 compounds of formula Il wherein A_1 is hydrogen, B_1 and B_3 are both CH_3 , and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DXIII provides 782 compounds of formula Im wherein A_1 is hydrogen, B_1 and B_3 are both CH_3 , and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DXIV provides 782 compounds of formula In wherein A_1 is hydrogen, B_1 and B_3 are both CH_3 , and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DXV provides 782 compounds of formula Io wherein A_1 is hydrogen, B_1 and B_3 are both CH_3 , and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DXVI provides 782 compounds of formula Ip wherein A_1 is hydrogen, B_1 and B_3 are both CH_3 , and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DXVII provides 782 compounds of formula Iq wherein A_1 is hydrogen, B_1 and B_3 are both CH_3 , and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DXVIII provides 782 compounds of formula Ir wherein A_1 is hydrogen, B_1 and B_3 are both CH_3 , and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DXIX provides 782 compounds of formula Is wherein A_1 is hydrogen, B_1 and B_3 are both CH_3 , and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DXX provides 782 compounds of formula It wherein A_1 is hydrogen, B_1 and B_3 are both CH_3 , and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DXXI provides 782 compounds of formula Iu wherein A_1 is hydrogen, B_1 and B_3 are both CH_3 , and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DXXII provides 782 compounds of formula Iv wherein A_1 is hydrogen, B_1 and B_3 are both CH_3 , and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DXXIII provides 782 compounds of formula Iw wherein A_1 is hydrogen, B_1 and B_3 are both CH_3 , and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DXXIV provides 782 compounds of formula Ix wherein A_1 is hydrogen, B_1 and B_3 are both CH_3 , and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DXXV provides 782 compounds of formula Iy wherein A₁ is hydrogen, B₁ and B₃ are both CH₃, and B₂ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table DXXVI provides 782 compounds of formula Iz wherein A₁ is hydrogen, B₁ and B₃ are both CH₃, and B₂ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table DXXVII provides 782 compounds of formula Iaa wherein A₁ is hydrogen, B₁ and B₃ are both CH₃, and B₂ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table DXXVIII provides 782 compounds of formula Iab wherein A₁ is hydrogen, B₁ and B₃ are both CH₃, and B₂ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table DXXIX provides 782 compounds of formula Iac wherein A₁ is hydrogen, B₁ and B₃ are both CH₃, and B₂ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table DXXX provides 782 compounds of formula Iad wherein A₁ is hydrogen, B₁ and B₃ are both CH₃, and B₂ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table DXXXI provides 782 compounds of formula Iae wherein A₁ is hydrogen, B₁ and B₃ are both CH₃, and B₂ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table DXXXII provides 782 compounds of formula Iaf wherein A₁ is hydrogen, B₁ and B₃ are both CH₃, and B₂ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table DXXXIII provides 782 compounds of formula Iag wherein A₁ is hydrogen, B₁ and B₃ are both CH₃, and B₂ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table DXXXIV provides 782 compounds of formula Iah wherein A₁ is hydrogen, B₁ and B₃ are both CH₃, and B₂ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table DXXXV provides 782 compounds of formula Iai wherein A_1 is hydrogen, B_1 and B_3 are both CH_3 , and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

5 Table DXXXVI provides 782 compounds of formula Iaj wherein A_1 is hydrogen, B_1 and B_3 are both CH_3 , and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DXXXVII provides 782 compounds of formula Iak wherein A_1 is hydrogen, B_1 and B_3 are both CH_3 , and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

10 Table DXXXVIII provides 782 compounds of formula Ial wherein A_1 is hydrogen, B_1 and B_3 are both CH_3 , and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

15 Table DXXXIX provides 782 compounds of formula Iam wherein A_1 is hydrogen, B_1 and B_3 are both CH_3 , and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DXL provides 782 compounds of formula Ian wherein A_1 is hydrogen, B_1 and B_3 are both CH_3 , and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

20 Table DXLI provides 782 compounds of formula Iao wherein A_1 is hydrogen, B_1 and B_3 are both CH_3 , and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DXLII provides 782 compounds of formula Iap wherein A_1 is hydrogen, B_1 and B_3 are both CH_3 , and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

25 Table DXLIII provides 782 compounds of formula Iaq wherein A_1 is hydrogen, B_1 and B_3 are both CH_3 , and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

30 Table DXLIV provides 782 compounds of formula Iar wherein A_1 is hydrogen, B_1 and B_3 are both CH_3 , and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DXLV provides 782 compounds of formula Ias wherein A_1 is hydrogen, B_1 and B_3 are both CH_3 , and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DXLVI provides 782 compounds of formula Iat wherein A_1 is hydrogen, B_1 and B_3 are both CH_3 , and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DXLVII provides 782 compounds of formula Iau wherein A_1 is hydrogen, B_1 and B_3 are both CH_3 , and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DXLVIII provides 782 compounds of formula Iav wherein A_1 is hydrogen, B_1 and B_3 are both CH_3 , and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DXLIX provides 782 compounds of formula Iaw wherein A_1 is hydrogen, B_1 and B_3 are both CH_3 , and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DL provides 782 compounds of formula Iax wherein A_1 is hydrogen, B_1 and B_3 are both CH_3 , and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DLI provides 782 compounds of formula Iay wherein A_1 is hydrogen, B_1 and B_3 are both CH_3 , and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DLII provides 782 compounds of formula Iaz wherein A_1 is hydrogen, B_1 and B_3 are both CH_3 , and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DLIII provides 782 compounds of formula Iba wherein A_1 is hydrogen, B_1 and B_3 are both CH_3 , and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DLIV provides 782 compounds of formula Ibb wherein A_1 is hydrogen, B_1 and B_3 are both CH_3 , and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DLV provides 782 compounds of formula Ibc wherein A_1 is hydrogen, B_1 and B_3 are both CH_3 , and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DLVI provides 782 compounds of formula Ibd wherein A_1 is hydrogen, B_1 and B_3 are both CH_3 , and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DLVII provides 782 compounds of formula Ibe wherein A_1 is hydrogen, B_1 and B_3 are both CH_3 , and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DLVIII provides 782 compounds of formula Ibf wherein A_1 is hydrogen, B_1 and B_3 are both CH_3 , and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DLIX provides 782 compounds of formula Ibg wherein A_1 is hydrogen, B_1 and B_3 are both CH_3 , and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DLX provides 782 compounds of formula Ibh wherein A_1 is hydrogen, B_1 and B_3 are both CH_3 , and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DLXI provides 782 compounds of formula Ibi wherein A_1 is hydrogen, B_1 and B_3 are both CH_3 , and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DLXII provides 782 compounds of formula Ibj wherein A_1 is hydrogen, B_1 and B_3 are both CH_3 , and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DLXIII provides 782 compounds of formula Ibk wherein A_1 is hydrogen, B_1 and B_3 are both CH_3 , and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DLXIV provides 782 compounds of formula Ibl wherein A_1 is hydrogen, B_1 and B_3 are both CH_3 , and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DLXV provides 782 compounds of formula Ibm wherein A_1 is hydrogen, B_1 and B_3 are both CH_3 , and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DLXVI provides 782 compounds of formula Ibn wherein A_1 is hydrogen, B_1 and B_3 are both CH_3 , and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DLXVII provides 782 compounds of formula Ibo wherein A_1 is hydrogen, B_1 and B_3 are both CH_3 , and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCI provides 782 compounds of formula Ia wherein A_1 is hydrogen, B_1 and B_4 are both CH_3 , and B_2 and B_3 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCII provides 782 compounds of formula Ib wherein A_1 is hydrogen, B_1 and B_4 are both CH_3 , and B_2 and B_3 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCIII provides 782 compounds of formula Ic wherein A_1 is hydrogen, B_1 and B_4 are both CH_3 , and B_2 and B_3 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCIV provides 782 compounds of formula Id wherein A_1 is hydrogen, B_1 and B_4 are both CH_3 , and B_2 and B_3 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCV provides 782 compounds of formula Ie wherein A_1 is hydrogen, B_1 and B_4 are both CH_3 , and B_2 and B_3 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCVI provides 782 compounds of formula If wherein A_1 is hydrogen, B_1 and B_4 are both CH_3 , and B_2 and B_3 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCVII provides 782 compounds of formula Ig wherein A_1 is hydrogen, B_1 and B_4 are both CH_3 , and B_2 and B_3 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCVIII provides 782 compounds of formula Ih wherein A_1 is hydrogen, B_1 and B_4 are both CH_3 , and B_2 and B_3 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCLX provides 782 compounds of formula Ii wherein A_1 is hydrogen, B_1 and B_4 are both CH_3 , and B_2 and B_3 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCX provides 782 compounds of formula Ij wherein A_1 is hydrogen, B_1 and B_4 are both CH_3 , and B_2 and B_3 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCXI provides 782 compounds of formula Ik wherein A_1 is hydrogen, B_1 and B_4 are both CH_3 , and B_2 and B_3 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCXII provides 782 compounds of formula Il wherein A_1 is hydrogen, B_1 and B_4 are both CH_3 , and B_2 and B_3 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCXIII provides 782 compounds of formula Im wherein A_1 is hydrogen, B_1 and B_4 are both CH_3 , and B_2 and B_3 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCXIV provides 782 compounds of formula In wherein A_1 is hydrogen, B_1 and B_4 are both CH_3 , and B_2 and B_3 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCXV provides 782 compounds of formula Io wherein A_1 is hydrogen, B_1 and B_4 are both CH_3 , and B_2 and B_3 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCXVI provides 782 compounds of formula Ip wherein A_1 is hydrogen, B_1 and B_4 are both CH_3 , and B_2 and B_3 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCXVII provides 782 compounds of formula Iq wherein A_1 is hydrogen, B_1 and B_4 are both CH_3 , and B_2 and B_3 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCXVIII provides 782 compounds of formula Ir wherein A_1 is hydrogen, B_1 and B_4 are both CH_3 , and B_2 and B_3 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCXLIX provides 782 compounds of formula Is wherein A_1 is hydrogen, B_1 and B_4 are both CH_3 , and B_2 and B_3 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCXX provides 782 compounds of formula It wherein A_1 is hydrogen, B_1 and B_4 are both CH_3 , and B_2 and B_3 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCXXI provides 782 compounds of formula Iu wherein A_1 is hydrogen, B_1 and B_4 are both CH_3 , and B_2 and B_3 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCXXII provides 782 compounds of formula Iv wherein A_1 is hydrogen, B_1 and B_4 are both CH_3 , and B_2 and B_3 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCXXIII provides 782 compounds of formula Iw wherein A_1 is hydrogen, B_1 and B_4 are both CH_3 , and B_2 and B_3 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCXXIV provides 782 compounds of formula Ix wherein A_1 is hydrogen, B_1 and B_4 are both CH_3 , and B_2 and B_3 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCXXV provides 782 compounds of formula Iy wherein A_1 is hydrogen, B_1 and B_4 are both CH_3 , and B_2 and B_3 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCXXVI provides 782 compounds of formula Iz wherein A_1 is hydrogen, B_1 and B_4 are both CH_3 , and B_2 and B_3 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCXXVII provides 782 compounds of formula Iaa wherein A_1 is hydrogen, B_1 and B_4 are both CH_3 , and B_2 and B_3 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCXXVIII provides 782 compounds of formula Iab wherein A_1 is hydrogen, B_1 and B_4 are both CH_3 , and B_2 and B_3 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCXXIX provides 782 compounds of formula Iac wherein A_1 is hydrogen, B_1 and B_4 are both CH_3 , and B_2 and B_3 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCXXX provides 782 compounds of formula Iad wherein A_1 is hydrogen, B_1 and B_4 are both CH_3 , and B_2 and B_3 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCXXXI provides 782 compounds of formula Iae wherein A_1 is hydrogen, B_1 and B_4 are both CH_3 , and B_2 and B_3 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCXXXII provides 782 compounds of formula Iaf wherein A_1 is hydrogen, B_1 and B_4 are both CH_3 , and B_2 and B_3 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCXXXIII provides 782 compounds of formula Iag wherein A_1 is hydrogen, B_1 and B_4 are both CH_3 , and B_2 and B_3 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCXXXIV provides 782 compounds of formula Iah wherein A_1 is hydrogen, B_1 and B_4 are both CH_3 , and B_2 and B_3 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCXXXV provides 782 compounds of formula Iai wherein A_1 is hydrogen, B_1 and B_4 are both CH_3 , and B_2 and B_3 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCXXXVI provides 782 compounds of formula Iaj wherein A_1 is hydrogen, B_1 and B_4 are both CH_3 , and B_2 and B_3 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCXXXVII provides 782 compounds of formula Iak wherein A_1 is hydrogen, B_1 and B_4 are both CH_3 , and B_2 and B_3 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCXXXVIII provides 782 compounds of formula Ial wherein A_1 is hydrogen, B_1 and B_4 are both CH_3 , and B_2 and B_3 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCXXXIX provides 782 compounds of formula Iam wherein A_1 is hydrogen, B_1 and B_4 are both CH_3 , and B_2 and B_3 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCXL provides 782 compounds of formula Ian wherein A_1 is hydrogen, B_1 and B_4 are both CH_3 , and B_2 and B_3 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCXLI provides 782 compounds of formula Iao wherein A_1 is hydrogen, B_1 and B_4 are both CH_3 , and B_2 and B_3 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCXLII provides 782 compounds of formula Iap wherein A_1 is hydrogen, B_1 and B_4 are both CH_3 , and B_2 and B_3 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCXLIII provides 782 compounds of formula Ia q wherein A_1 is hydrogen, B_1 and B_4 are both CH_3 , and B_2 and B_3 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCXLIV provides 782 compounds of formula Iar wherein A_1 is hydrogen, B_1 and B_4 are both CH_3 , and B_2 and B_3 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCXLV provides 782 compounds of formula Ias wherein A_1 is hydrogen, B_1 and B_4 are both CH_3 , and B_2 and B_3 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCXLVI provides 782 compounds of formula Iat wherein A_1 is hydrogen, B_1 and B_4 are both CH_3 , and B_2 and B_3 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCXLVII provides 782 compounds of formula Iau wherein A_1 is hydrogen, B_1 and B_4 are both CH_3 , and B_2 and B_3 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCXLVIII provides 782 compounds of formula Iav wherein A_1 is hydrogen, B_1 and B_4 are both CH_3 , and B_2 and B_3 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCXLIX provides 782 compounds of formula Iaw wherein A_1 is hydrogen, B_1 and B_4 are both CH_3 , and B_2 and B_3 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCL provides 782 compounds of formula Iax wherein A_1 is hydrogen, B_1 and B_4 are both CH_3 , and B_2 and B_3 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCLI provides 782 compounds of formula Iay wherein A_1 is hydrogen, B_1 and B_4 are both CH_3 , and B_2 and B_3 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCLII provides 782 compounds of formula Iaz wherein A_1 is hydrogen, B_1 and B_4 are both CH_3 , and B_2 and B_3 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCLIII provides 782 compounds of formula Iba wherein A_1 is hydrogen, B_1 and B_4 are both CH_3 , and B_2 and B_3 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCLIV provides 782 compounds of formula Ibb wherein A_1 is hydrogen, B_1 and B_4 are both CH_3 , and B_2 and B_3 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCLV provides 782 compounds of formula Ibc wherein A_1 is hydrogen, B_1 and B_4 are both CH_3 , and B_2 and B_3 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCLVI provides 782 compounds of formula Ibd wherein A_1 is hydrogen, B_1 and B_4 are both CH_3 , and B_2 and B_3 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCLVII provides 782 compounds of formula Ibe wherein A_1 is hydrogen, B_1 and B_4 are both CH_3 , and B_2 and B_3 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCLVIII provides 782 compounds of formula Ibf wherein A_1 is hydrogen, B_1 and B_4 are both CH_3 , and B_2 and B_3 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCLIX provides 782 compounds of formula Ibg wherein A_1 is hydrogen, B_1 and B_4 are both CH_3 , and B_2 and B_3 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCLX provides 782 compounds of formula Ibh wherein A_1 is hydrogen, B_1 and B_4 are both CH_3 , and B_2 and B_3 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCLXI provides 782 compounds of formula Ibi wherein A_1 is hydrogen, B_1 and B_4 are both CH_3 , and B_2 and B_3 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCLXII provides 782 compounds of formula Ibj wherein A_1 is hydrogen, B_1 and B_4 are both CH_3 , and B_2 and B_3 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCLXIII provides 782 compounds of formula Ibk wherein A_1 is hydrogen, B_1 and B_4 are both CH_3 , and B_2 and B_3 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCLXIV provides 782 compounds of formula Ibl wherein A_1 is hydrogen, B_1 and B_4 are both CH_3 , and B_2 and B_3 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCLXV provides 782 compounds of formula Ibm wherein A_1 is hydrogen, B_1 and B_4 are both CH_3 , and B_2 and B_3 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCLXVI provides 782 compounds of formula Ibn wherein A_1 is hydrogen, B_1 and B_4 are both CH_3 , and B_2 and B_3 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCLXVII provides 782 compounds of formula Ibo wherein A_1 is hydrogen, B_1 and B_4 are both CH_3 , and B_2 and B_3 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCCI provides 782 compounds of formula Ia wherein A_1 is hydrogen, B_1 , B_2 , B_3 and B_4 are all CH_3 and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCCII provides 782 compounds of formula Ib wherein A_1 is hydrogen, B_1 , B_2 , B_3 and B_4 are all CH_3 and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCCIII provides 782 compounds of formula Ic wherein A_1 is hydrogen, B_1 , B_2 , B_3 and B_4 are all CH_3 and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

5 Table DCCIV provides 782 compounds of formula Id wherein A_1 is hydrogen, B_1 , B_2 , B_3 and B_4 are all CH_3 and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCCV provides 782 compounds of formula Ie wherein A_1 is hydrogen, B_1 , B_2 , B_3 and B_4 are all CH_3 and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

10 Table DCCVI provides 782 compounds of formula If wherein A_1 is hydrogen, B_1 , B_2 , B_3 and B_4 are all CH_3 and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCCVII provides 782 compounds of formula Ig wherein A_1 is hydrogen, B_1 , B_2 , B_3 and B_4 are all CH_3 and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCCVIII provides 782 compounds of formula Ih wherein A_1 is hydrogen, B_1 , B_2 , B_3 and B_4 are all CH_3 and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

15 Table DCCIX provides 782 compounds of formula Ii wherein A_1 is hydrogen, B_1 , B_2 , B_3 and B_4 are all CH_3 and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCCX provides 782 compounds of formula Ij wherein A_1 is hydrogen, B_1 , B_2 , B_3 and B_4 are all CH_3 and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

20 Table DCCXI provides 782 compounds of formula Ik wherein A_1 is hydrogen, B_1 , B_2 , B_3 and B_4 are all CH_3 and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCCXII provides 782 compounds of formula Il wherein A_1 is hydrogen, B_1 , B_2 , B_3 and B_4 are all CH_3 and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCCXIII provides 782 compounds of formula Im wherein A_1 is hydrogen, B_1 , B_2 , B_3 and B_4 are all CH_3 and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

25 Table DCCXIV provides 782 compounds of formula In wherein A_1 is hydrogen, B_1 , B_2 , B_3 and B_4 are all CH_3 and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCCXV provides 782 compounds of formula Io wherein A_1 is hydrogen, B_1 , B_2 , B_3 and B_4 are all CH_3 and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

30 Table DCCXVI provides 782 compounds of formula Ip wherein A_1 is hydrogen, B_1 , B_2 , B_3 and B_4 are all CH_3 and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCCXVII provides 782 compounds of formula Iq wherein A_1 is hydrogen, B_1 , B_2 , B_3 and B_4 are all CH_3 and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCCXVIII provides 782 compounds of formula Ir wherein A_1 is hydrogen, B_1 , B_2 , B_3 and B_4 are all CH_3 and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCCXIX provides 782 compounds of formula Is wherein A_1 is hydrogen, B_1 , B_2 , B_3 and B_4 are all CH_3 and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

5 Table DCCXX provides 782 compounds of formula It wherein A_1 is hydrogen, B_1 , B_2 , B_3 and B_4 are all CH_3 and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCCXXI provides 782 compounds of formula Iu wherein A_1 is hydrogen, B_1 , B_2 , B_3 and B_4 are all CH_3 and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

10 Table DCCXXII provides 782 compounds of formula Iv wherein A_1 is hydrogen, B_1 , B_2 , B_3 and B_4 are all CH_3 and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCCXXIII provides 782 compounds of formula Iw wherein A_1 is hydrogen, B_1 , B_2 , B_3 and B_4 are all CH_3 and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCCXXIV provides 782 compounds of formula Ix wherein A_1 is hydrogen, B_1 , B_2 , B_3 and B_4 are all CH_3 and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

15 Table DCCXXV provides 782 compounds of formula Iy wherein A_1 is hydrogen, B_1 , B_2 , B_3 and B_4 are all CH_3 and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCCXXVI provides 782 compounds of formula Iz wherein A_1 is hydrogen, B_1 , B_2 , B_3 and B_4 are all CH_3 and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

20 Table DCCXXVII provides 782 compounds of formula Iaa wherein A_1 is hydrogen, B_1 , B_2 , B_3 and B_4 are all CH_3 and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCCXXVIII provides 782 compounds of formula Iab wherein A_1 is hydrogen, B_1 , B_2 , B_3 and B_4 are all CH_3 and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCCXXIX provides 782 compounds of formula Iac wherein A_1 is hydrogen, B_1 , B_2 , B_3 and B_4 are all CH_3 and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

25 Table DCCXXX provides 782 compounds of formula Iad wherein A_1 is hydrogen, B_1 , B_2 , B_3 and B_4 are all CH_3 and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCCXXXI provides 782 compounds of formula Iae wherein A_1 is hydrogen, B_1 , B_2 , B_3 and B_4 are all CH_3 and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

30 Table DCCXXXII provides 782 compounds of formula Iaf wherein A_1 is hydrogen, B_1 , B_2 , B_3 and B_4 are all CH_3 and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCCXXXIII provides 782 compounds of formula Iag wherein A_1 is hydrogen, B_1 , B_2 , B_3 and B_4 are all CH_3 and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCCXXXIV provides 782 compounds of formula Ia_h wherein A₁ is hydrogen, B₁, B₂, B₃ and B₄ are all CH₃ and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table DCCXXXV provides 782 compounds of formula Ia_i wherein A₁ is hydrogen, B₁, B₂, B₃ and B₄ are all CH₃ and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

5 Table DCCXXXVI provides 782 compounds of formula Ia_j wherein A₁ is hydrogen, B₁, B₂, B₃ and B₄ are all CH₃ and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table DCCXXXVII provides 782 compounds of formula Ia_k wherein A₁ is hydrogen, B₁, B₂, B₃ and B₄ are all CH₃ and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

10 Table DCCXXXVIII provides 782 compounds of formula Ia_l wherein A₁ is hydrogen, B₁, B₂, B₃ and B₄ are all CH₃ and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table DCCXXXIX provides 782 compounds of formula Ia_m wherein A₁ is hydrogen, B₁, B₂, B₃ and B₄ are all CH₃ and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table DCCXL provides 782 compounds of formula Ia_n wherein A₁ is hydrogen, B₁, B₂, B₃ and B₄ are all CH₃ and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

15 Table DCCXLI provides 782 compounds of formula Ia_o wherein A₁ is hydrogen, B₁, B₂, B₃ and B₄ are all CH₃ and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table DCCXLII provides 782 compounds of formula Ia_p wherein A₁ is hydrogen, B₁, B₂, B₃ and B₄ are all CH₃ and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

20 Table DCCXLIII provides 782 compounds of formula Ia_q wherein A₁ is hydrogen, B₁, B₂, B₃ and B₄ are all CH₃ and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table DCCXLIV provides 782 compounds of formula Ia_r wherein A₁ is hydrogen, B₁, B₂, B₃ and B₄ are all CH₃ and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table DCCXLV provides 782 compounds of formula Ia_s wherein A₁ is hydrogen, B₁, B₂, B₃ and B₄ are all CH₃ and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

25 Table DCCXLVI provides 782 compounds of formula Ia_t wherein A₁ is hydrogen, B₁, B₂, B₃ and B₄ are all CH₃ and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table DCCXLVII provides 782 compounds of formula Ia_u wherein A₁ is hydrogen, B₁, B₂, B₃ and B₄ are all CH₃ and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

30 Table DCCXLVIII provides 782 compounds of formula Ia_v wherein A₁ is hydrogen, B₁, B₂, B₃ and B₄ are all CH₃ and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table DCCXLIX provides 782 compounds of formula Ia_w wherein A₁ is hydrogen, B₁, B₂, B₃ and B₄ are all CH₃ and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table DCCL provides 782 compounds of formula Iax wherein A_1 is hydrogen, B_1 , B_2 , B_3 and B_4 are all CH_3 and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCCLI provides 782 compounds of formula Iay wherein A_1 is hydrogen, B_1 , B_2 , B_3 and B_4 are all CH_3 and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

5 Table DCCLII provides 782 compounds of formula Iaz wherein A_1 is hydrogen, B_1 , B_2 , B_3 and B_4 are all CH_3 and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCCLIII provides 782 compounds of formula Iba wherein A_1 is hydrogen, B_1 , B_2 , B_3 and B_4 are all CH_3 and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

10 Table DCCLIV provides 782 compounds of formula Ibb wherein A_1 is hydrogen, B_1 , B_2 , B_3 and B_4 are all CH_3 and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCCLV provides 782 compounds of formula Ibc wherein A_1 is hydrogen, B_1 , B_2 , B_3 and B_4 are all CH_3 and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCCLVI provides 782 compounds of formula Ibd wherein A_1 is hydrogen, B_1 , B_2 , B_3 and B_4 are all CH_3 and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

15 Table DCCLVII provides 782 compounds of formula Ibe wherein A_1 is hydrogen, B_1 , B_2 , B_3 and B_4 are all CH_3 and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCCLVIII provides 782 compounds of formula Ibf wherein A_1 is hydrogen, B_1 , B_2 , B_3 and B_4 are all CH_3 and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

20 Table DCCLIX provides 782 compounds of formula Ibg wherein A_1 is hydrogen, B_1 , B_2 , B_3 and B_4 are all CH_3 and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCCLX provides 782 compounds of formula Ibh wherein A_1 is hydrogen, B_1 , B_2 , B_3 and B_4 are all CH_3 and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCCLXI provides 782 compounds of formula Ibi wherein A_1 is hydrogen, B_1 , B_2 , B_3 and B_4 are all CH_3 and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

25 Table DCCLXII provides 782 compounds of formula Ibj wherein A_1 is hydrogen, B_1 , B_2 , B_3 and B_4 are all CH_3 and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCCLXIII provides 782 compounds of formula Ibk wherein A_1 is hydrogen, B_1 , B_2 , B_3 and B_4 are all CH_3 and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

30 Table DCCLXIV provides 782 compounds of formula Ibl wherein A_1 is hydrogen, B_1 , B_2 , B_3 and B_4 are all CH_3 and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCCLXV provides 782 compounds of formula Ibm wherein A_1 is hydrogen, B_1 , B_2 , B_3 and B_4 are all CH_3 and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCCLXVI provides 782 compounds of formula Ibn wherein A_1 is hydrogen, B_1 , B_2 , B_3 and B_4 are all CH_3 and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCCLXVII provides 782 compounds of formula Ibo wherein A_1 is hydrogen, B_1 , B_2 , B_3 and B_4 are all CH_3 and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

5 Table DCCCI provides 782 compounds of formula Ia wherein A_1 is hydrogen, B_1 and B_2 are together $=O$ and B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCCCII provides 782 compounds of formula Ib wherein A_1 is hydrogen, B_1 and B_2 are together $=O$ and B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are
10 given in Table 1.

Table DCCCIII provides 782 compounds of formula Ic wherein A_1 is hydrogen, B_1 and B_2 are together $=O$ and B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCCCIV provides 782 compounds of formula Id wherein A_1 is hydrogen, B_1 and B_2 are together $=O$ and B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8
15 are given in Table 1.

Table DCCCV provides 782 compounds of formula Ie wherein A_1 is hydrogen, B_1 and B_2 are together $=O$ and B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

20 Table DCCCVI provides 782 compounds of formula If wherein A_1 is hydrogen, B_1 and B_2 are together $=O$ and B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCCCVII provides 782 compounds of formula Ig wherein A_1 is hydrogen, B_1 and B_2 are together $=O$ and B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8
25 are given in Table 1.

Table DCCCVIII provides 782 compounds of formula Ih wherein A_1 is hydrogen, B_1 and B_2 are together $=O$ and B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCCCLIX provides 782 compounds of formula Ii wherein A_1 is hydrogen, B_1 and B_2 are together $=O$ and B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are
30 given in Table 1.

Table DCCCX provides 782 compounds of formula Ij wherein A_1 is hydrogen, B_1 and B_2 are together =O and B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCCCXI provides 782 compounds of formula Ik wherein A_1 is hydrogen, B_1 and B_2 are together =O and B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCCCXII provides 782 compounds of formula Il wherein A_1 is hydrogen, B_1 and B_2 are together =O and B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCCCXIII provides 782 compounds of formula Im wherein A_1 is hydrogen, B_1 and B_2 are together =O and B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCCCXIV provides 782 compounds of formula In wherein A_1 is hydrogen, B_1 and B_2 are together =O and B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCCCXV provides 782 compounds of formula Io wherein A_1 is hydrogen, B_1 and B_2 are together =O and B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCCCXVI provides 782 compounds of formula Ip wherein A_1 is hydrogen, B_1 and B_2 are together =O and B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCCCXVII provides 782 compounds of formula Iq wherein A_1 is hydrogen, B_1 and B_2 are together =O and B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCCCXVIII provides 782 compounds of formula Ir wherein A_1 is hydrogen, B_1 and B_2 are together =O and B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCCCXIX provides 782 compounds of formula Is wherein A_1 is hydrogen, B_1 and B_2 are together =O and B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCCCXX provides 782 compounds of formula It wherein A_1 is hydrogen, B_1 and B_2 are together =O and B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCCCXXI provides 782 compounds of formula Iu wherein A_1 is hydrogen, B_1 and B_2 are together =O and B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCCCXXII provides 782 compounds of formula Iv wherein A_1 is hydrogen, B_1 and B_2 are together =O and B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCCCXXIII provides 782 compounds of formula Iw wherein A_1 is hydrogen, B_1 and B_2 are together =O and B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCCCXXIV provides 782 compounds of formula Ix wherein A_1 is hydrogen, B_1 and B_2 are together =O and B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCCCXXV provides 782 compounds of formula Iy wherein A_1 is hydrogen, B_1 and B_2 are together =O and B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCCCXXVI provides 782 compounds of formula Iz wherein A_1 is hydrogen, B_1 and B_2 are together =O and B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCCCXXVII provides 782 compounds of formula Iaa wherein A_1 is hydrogen, B_1 and B_2 are together =O and B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCCCXXVIII provides 782 compounds of formula Iab wherein A_1 is hydrogen, B_1 and B_2 are together =O and B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCCCXXIX provides 782 compounds of formula Iac wherein A_1 is hydrogen, B_1 and B_2 are together =O and B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCCCXXX provides 782 compounds of formula Iad wherein A_1 is hydrogen, B_1 and B_2 are together =O and B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

5 Table DCCCXXXI provides 782 compounds of formula Iae wherein A_1 is hydrogen, B_1 and B_2 are together =O and B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCCCXXXII provides 782 compounds of formula Iaf wherein A_1 is hydrogen, B_1 and B_2 are together =O and B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

10 Table DCCCXXXIII provides 782 compounds of formula Iag wherein A_1 is hydrogen, B_1 and B_2 are together =O and B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCCCXXXIV provides 782 compounds of formula Iah wherein A_1 is hydrogen, B_1 and B_2 are together =O and B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCCCXXXV provides 782 compounds of formula Iai wherein A_1 is hydrogen, B_1 and B_2 are together =O and B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCCCXXXVI provides 782 compounds of formula Iaj wherein A_1 is hydrogen, B_1 and B_2 are together =O and B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCCCXXXVII provides 782 compounds of formula Iak wherein A_1 is hydrogen, B_1 and B_2 are together =O and B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

25 Table DCCCXXXVIII provides 782 compounds of formula Ial wherein A_1 is hydrogen, B_1 and B_2 are together =O and B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCCCXXXIX provides 782 compounds of formula Iam wherein A_1 is hydrogen, B_1 and B_2 are together =O and B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

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Table DCCCXL provides 782 compounds of formula Ian wherein A_1 is hydrogen, B_1 and B_2 are together =O and B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

5 Table DCCCXLI provides 782 compounds of formula Iao wherein A_1 is hydrogen, B_1 and B_2 are together =O and B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCCCXLII provides 782 compounds of formula Iap wherein A_1 is hydrogen, B_1 and B_2 are together =O and B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

10 Table DCCCXLIII provides 782 compounds of formula Iaq wherein A_1 is hydrogen, B_1 and B_2 are together =O and B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCCCXLIV provides 782 compounds of formula Iar wherein A_1 is hydrogen, B_1 and B_2 are together =O and B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCCCXLV provides 782 compounds of formula Ias wherein A_1 is hydrogen, B_1 and B_2 are together =O and B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

20 Table DCCCXLVI provides 782 compounds of formula Iat wherein A_1 is hydrogen, B_1 and B_2 are together =O and B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCCCXLVII provides 782 compounds of formula Iau wherein A_1 is hydrogen, B_1 and B_2 are together =O and B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

25 Table DCCCXLVIII provides 782 compounds of formula Iav wherein A_1 is hydrogen, B_1 and B_2 are together =O and B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCCCXLIX provides 782 compounds of formula Iaw wherein A_1 is hydrogen, B_1 and B_2 are together =O and B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

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Table DCCCL provides 782 compounds of formula Iax wherein A_1 is hydrogen, B_1 and B_2 are together =O and B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

5 Table DCCCLI provides 782 compounds of formula Iay wherein A_1 is hydrogen, B_1 and B_2 are together =O and B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCCCLII provides 782 compounds of formula Iaz wherein A_1 is hydrogen, B_1 and B_2 are together =O and B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

10 Table DCCCLIII provides 782 compounds of formula Iba wherein A_1 is hydrogen, B_1 and B_2 are together =O and B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCCCLIV provides 782 compounds of formula Ibb wherein A_1 is hydrogen, B_1 and B_2 are together =O and B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

15 Table DCCCLV provides 782 compounds of formula Ibc wherein A_1 is hydrogen, B_1 and B_2 are together =O and B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCCCLVI provides 782 compounds of formula Ibd wherein A_1 is hydrogen, B_1 and B_2 are together =O and B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCCCLVII provides 782 compounds of formula Ibe wherein A_1 is hydrogen, B_1 and B_2 are together =O and B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

25 Table DCCCLVIII provides 782 compounds of formula Ibf wherein A_1 is hydrogen, B_1 and B_2 are together =O and B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table DCCCLIX provides 782 compounds of formula Ibg wherein A_1 is hydrogen, B_1 and B_2 are together =O and B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

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Table DCCCLX provides 782 compounds of formula Ibh wherein A₁ is hydrogen, B₁ and B₂ are together =O and B₃ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table DCCCLXI provides 782 compounds of formula Ibi wherein A₁ is hydrogen, B₁ and B₂ are together =O and B₃ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table DCCCLXII provides 782 compounds of formula Ibj wherein A₁ is hydrogen, B₁ and B₂ are together =O and B₃ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table DCCCLXIII provides 782 compounds of formula Ibk wherein A₁ is hydrogen, B₁ and B₂ are together =O and B₃ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table DCCCLXIV provides 782 compounds of formula Ibl wherein A₁ is hydrogen, B₁ and B₂ are together =O and B₃ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table DCCCLXV provides 782 compounds of formula Ibm wherein A₁ is hydrogen, B₁ and B₂ are together =O and B₃ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table DCCCLXVI provides 782 compounds of formula Ibn wherein A₁ is hydrogen, B₁ and B₂ are together =O and B₃ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table DCCCLXVII provides 782 compounds of formula Ibo wherein A₁ is hydrogen, B₁ and B₂ are together =O and B₃ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CMI provides 782 compounds of formula Ia wherein A₁ and B₁ together form a bond and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CMII provides 782 compounds of formula Ib wherein A₁ and B₁ together form a bond and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CMIII provides 782 compounds of formula Ic wherein A₁ and B₁ together form

a bond and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CMIV provides 782 compounds of formula Id wherein A₁ and B₁ together form a bond and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given
5 in Table 1.

Table CMV provides 782 compounds of formula Ie wherein A₁ and B₁ together form a bond and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CMVI provides 782 compounds of formula If wherein A₁ and B₁ together form
10 a bond and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CMVII provides 782 compounds of formula Ig wherein A₁ and B₁ together form a bond and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

15 Table CMVIII provides 782 compounds of formula Ih wherein A₁ and B₁ together form a bond and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CMLX provides 782 compounds of formula Ii wherein A₁ and B₁ together form a bond and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given
20 in Table 1.

Table CMX provides 782 compounds of formula Ij wherein A₁ and B₁ together form a bond and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CMXI provides 782 compounds of formula Ik wherein A₁ and B₁ together form
25 a bond and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CMXII provides 782 compounds of formula Il wherein A₁ and B₁ together form a bond and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

30 Table CMXIII provides 782 compounds of formula Im wherein A₁ and B₁ together form a bond and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CMXIV provides 782 compounds of formula In wherein A₁ and B₁ together form a bond and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CMXV provides 782 compounds of formula Io wherein A₁ and B₁ together form a
5 bond and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CMXVI provides 782 compounds of formula Ip wherein A₁ and B₁ together form a bond and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

10 Table CMXVII provides 782 compounds of formula Iq wherein A₁ and B₁ together form a bond and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CMXVIII provides 782 compounds of formula Ir wherein A₁ and B₁ together form a bond and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given
15 in Table 1.

Table CMXIX provides 782 compounds of formula Is wherein A₁ and B₁ together form a bond and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CMXX provides 782 compounds of formula It wherein A₁ and B₁ together form
20 a bond and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CMXXI provides 782 compounds of formula Iu wherein A₁ and B₁ together form a bond and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

25 Table CMXXII provides 782 compounds of formula Iv wherein A₁ and B₁ together form a bond and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CMXXIII provides 782 compounds of formula Iw wherein A₁ and B₁ together form a bond and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given
30 in Table 1.

Table CMXXIV provides 782 compounds of formula Ix wherein A₁ and B₁ together form a bond and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CMXXV provides 782 compounds of formula Iy wherein A₁ and B₁ together form a
5 bond and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CMXXVI provides 782 compounds of formula Iz wherein A₁ and B₁ together form a bond and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

10 Table CMXXVII provides 782 compounds of formula Iaa wherein A₁ and B₁ together form a bond and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CMXXVIII provides 782 compounds of formula Iab wherein A₁ and B₁ together form a bond and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given
15 in Table 1.

Table CMXXIX provides 782 compounds of formula Iac wherein A₁ and B₁ together form a bond and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CMXXX provides 782 compounds of formula Iad wherein A₁ is hydrogen, B₁ and B₂
20 are together =O and B₃ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CMXXXI provides 782 compounds of formula Iae wherein A₁ and B₁ together form a bond and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

25 Table CMXXXII provides 782 compounds of formula Iaf wherein A₁ and B₁ together form a bond and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CMXXXIII provides 782 compounds of formula Iag wherein A₁ and B₁ together form a bond and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given
30 in Table 1.

Table CMXXXIV provides 782 compounds of formula Ia_h wherein A₁ and B₁ together form a bond and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CMXXXV provides 782 compounds of formula Ia_i wherein A₁ and B₁ together form a
5 bond and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CMXXXVI provides 782 compounds of formula Ia_j wherein A₁ and B₁ together form a bond and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

10 Table CMXXXVII provides 782 compounds of formula Ia_k wherein A₁ and B₁ together form a bond and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CMXXXVIII provides 782 compounds of formula Ia_l wherein A₁ and B₁ together form a bond and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given
15 in Table 1.

Table CMXXXIX provides 782 compounds of formula Ia_m wherein A₁ and B₁ together form a bond and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CMXL provides 782 compounds of formula Ia_n wherein A₁ and B₁ together form a
20 bond and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CMXLI provides 782 compounds of formula Ia_o wherein A₁ and B₁ together form a bond and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

25 Table CMXLII provides 782 compounds of formula Ia_p wherein A₁ and B₁ together form a bond and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CMXLIII provides 782 compounds of formula Ia_q wherein A₁ and B₁ together form a bond and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given
30 in Table 1.

Table CMXLIV provides 782 compounds of formula Iar wherein A₁ and B₁ together form a bond and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

5 Table CMXLV provides 782 compounds of formula Ias wherein A₁ and B₁ together form a bond and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CMXLVI provides 782 compounds of formula Iat wherein A₁ and B₁ together form a bond and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

10 Table CMXLVII provides 782 compounds of formula Iau wherein A₁ and B₁ together form a bond and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CMXLVIII provides 782 compounds of formula Iav wherein A₁ and B₁ together form a bond and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given
15 in Table 1.

Table CMXLIX provides 782 compounds of formula law wherein A₁ and B₁ together form a bond and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CML provides 782 compounds of formula Iax wherein A₁ and B₁ together form a bond
20 and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CMLI provides 782 compounds of formula Iay wherein A₁ and B₁ together form a bond and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

25 Table CMLII provides 782 compounds of formula Iaz wherein A₁ and B₁ together form a bond and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table CMLIII provides 782 compounds of formula Iba wherein A₁ and B₁ together form a bond and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given
30 in Table 1.

Table CMLIV provides 782 compounds of formula Ibb wherein A_1 and B_1 together form a bond and B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

5 Table CMLV provides 782 compounds of formula Ibc wherein A_1 and B_1 together form a bond and B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CMLVI provides 782 compounds of formula Ibd wherein A_1 and B_1 together form a bond and B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

10 Table CMLVII provides 782 compounds of formula Ibe wherein A_1 and B_1 together form a bond and B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CMLVIII provides 782 compounds of formula Ibf wherein A_1 and B_1 together form a bond and B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given
15 in Table 1.

Table CMLIX provides 782 compounds of formula Ibg wherein A_1 and B_1 together form a bond and B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CMLX provides 782 compounds of formula Ibh wherein A_1 and B_1 together form a
20 bond and B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CMLXI provides 782 compounds of formula Ibi wherein A_1 and B_1 together form a bond and B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

25 Table CMLXII provides 782 compounds of formula Ibj wherein A_1 and B_1 together form a bond and B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CMLXIII provides 782 compounds of formula Ibk wherein A_1 and B_1 together form a bond and B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given
30 in Table 1.

Table CMLXIV provides 782 compounds of formula Ibl wherein A_1 and B_1 together form a bond and B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CMLXV provides 782 compounds of formula Ibm wherein A_1 and B_1 together form a
5 bond and B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table CMLXVI provides 782 compounds of formula Ibn wherein A_1 and B_1 together form a bond and B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

10 Table CMLXVII provides 782 compounds of formula Ibo wherein A_1 and B_1 together form a bond and B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table MI provides 782 compounds of formula Ia wherein A_1 and B_1 together form
-CH₂- and B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given
15 in Table 1.

Table MII provides 782 compounds of formula Ib wherein A_1 and B_1 together form
-CH₂- and B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given
in Table 1.

Table MIII provides 782 compounds of formula Ic wherein A_1 and B_1 together form
20 -CH₂- and B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table MIV provides 782 compounds of formula Id wherein A_1 and B_1 together form
-CH₂- and B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given
in Table 1.

25 Table MV provides 782 compounds of formula Ie wherein A_1 and B_1 together form
-CH₂- and B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table MVI provides 782 compounds of formula If wherein A_1 and B_1 together form
-CH₂- and B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given
30 in Table 1.

Table MVII provides 782 compounds of formula Ig wherein A_1 and B_1 together form $-CH_2-$ and B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table MVIII provides 782 compounds of formula Ih wherein A_1 and B_1 together form $-CH_2-$ and B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table MLX provides 782 compounds of formula Ii wherein A_1 and B_1 together form $-CH_2-$ and B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table MX provides 782 compounds of formula Ij wherein A_1 and B_1 together form $-CH_2-$ and B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table MXI provides 782 compounds of formula Ik wherein A_1 and B_1 together form $-CH_2-$ and B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table MXII provides 782 compounds of formula Il wherein A_1 and B_1 together form $-CH_2-$ and B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table MXIII provides 782 compounds of formula Im wherein A_1 and B_1 together form $-CH_2-$ and B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table MXIV provides 782 compounds of formula In wherein A_1 and B_1 together form $-CH_2-$ and B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table MXV provides 782 compounds of formula Io wherein A_1 and B_1 together form $-CH_2-$ and B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table MXVI provides 782 compounds of formula Ip wherein A_1 and B_1 together form $-CH_2-$ and B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in

Table 1.

Table MXVII provides 782 compounds of formula Iq wherein A₁ and B₁ together form -CH₂- and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table MXVIII provides 782 compounds of formula Ir wherein A₁ and B₁ together form -CH₂- and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table MXIX provides 782 compounds of formula Is wherein A₁ and B₁ together form -CH₂- and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table MXX provides 782 compounds of formula It wherein A₁ and B₁ together form -CH₂- and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table MXXI provides 782 compounds of formula Iu wherein A₁ and B₁ together form -CH₂- and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table MXXII provides 782 compounds of formula Iv wherein A₁ and B₁ together form -CH₂- and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table MXXIII provides 782 compounds of formula Iw wherein A₁ and B₁ together form -CH₂- and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table MXXIV provides 782 compounds of formula Ix wherein A₁ and B₁ together form -CH₂- and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table MXXV provides 782 compounds of formula Iy wherein A₁ and B₁ together form -CH₂- and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table MXXVI provides 782 compounds of formula Iz wherein A₁ and B₁ together form -CH₂- and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table MXXVII provides 782 compounds of formula Iaa wherein A_1 and B_1 together form -
CH₂- and B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given
in Table 1.

Table MXXVIII provides 782 compounds of formula Iab wherein A_1 and B_1 together form -
5 CH₂- and B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given
in Table 1.

Table MXXIX provides 782 compounds of formula Iac wherein A_1 and B_1 together form -
CH₂- and B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given
in Table 1.

10 Table MXXX provides 782 compounds of formula Iad wherein A_1 is hydrogen, B_1 and B_2
are together =O and B_3 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8
are given in Table 1.

Table MXXXI provides 782 compounds of formula Iae wherein A_1 and B_1 together form -
CH₂- and B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given
15 in Table 1.

Table MXXXII provides 782 compounds of formula Iaf wherein A_1 and B_1 together form -
CH₂- and B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given
in Table 1.

Table MXXXIII provides 782 compounds of formula Iag wherein A_1 and B_1 together form -
20 CH₂- and B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given
in Table 1.

Table MXXXIV provides 782 compounds of formula Iah wherein A_1 and B_1 together form -
CH₂- and B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given
in Table 1.

25 Table MXXXV provides 782 compounds of formula Iai wherein A_1 and B_1 together form -
CH₂- and B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given
in Table 1.

Table MXXXVI provides 782 compounds of formula Iaj wherein A_1 and B_1 together form -
CH₂- and B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given
30 in Table 1.

Table MXXXVII provides 782 compounds of formula Ia_k wherein A₁ and B₁ together form -CH₂- and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table MXXXVIII provides 782 compounds of formula Ia_l wherein A₁ and B₁ together form -CH₂- and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table MXXXIX provides 782 compounds of formula Ia_m wherein A₁ and B₁ together form -CH₂- and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table MXL provides 782 compounds of formula Ia_n wherein A₁ and B₁ together form -CH₂- and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table MXLI provides 782 compounds of formula Ia_o wherein A₁ and B₁ together form -CH₂- and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table MXLII provides 782 compounds of formula Ia_p wherein A₁ and B₁ together form -CH₂- and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table MXLIII provides 782 compounds of formula Ia_q wherein A₁ and B₁ together form -CH₂- and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table MXLIV provides 782 compounds of formula Ia_r wherein A₁ and B₁ together form -CH₂- and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table MXLV provides 782 compounds of formula Ia_s wherein A₁ and B₁ together form -CH₂- and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table MXLVI provides 782 compounds of formula Ia_t wherein A₁ and B₁ together form -CH₂- and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table MXLVII provides 782 compounds of formula Ia_u wherein A₁ and B₁ together form -CH₂- and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table MXLVIII provides 782 compounds of formula Ia_v wherein A₁ and B₁ together form -CH₂- and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table MXLIX provides 782 compounds of formula Ia_w wherein A₁ and B₁ together form -CH₂- and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table ML provides 782 compounds of formula Ia_x wherein A₁ and B₁ together form -CH₂- and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table MLI provides 782 compounds of formula Ia_y wherein A₁ and B₁ together form -CH₂- and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table MLII provides 782 compounds of formula Ia_z wherein A₁ and B₁ together form -CH₂- and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table MLIII provides 782 compounds of formula Iba wherein A₁ and B₁ together form -CH₂- and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table MLIV provides 782 compounds of formula Ibb wherein A₁ and B₁ together form -CH₂- and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table MLV provides 782 compounds of formula Ibc wherein A₁ and B₁ together form -CH₂- and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table MLVI provides 782 compounds of formula Ibd wherein A₁ and B₁ together form -CH₂- and B₂, B₃ and B₄ are all hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table MLVII provides 782 compounds of formula Ibe wherein A_1 and B_1 together form -CH₂- and B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

5 Table MLVIII provides 782 compounds of formula Ibf wherein A_1 and B_1 together form -CH₂- and B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table MLIX provides 782 compounds of formula Ibg wherein A_1 and B_1 together form -CH₂- and B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

10 Table MLX provides 782 compounds of formula Ibh wherein A_1 and B_1 together form -CH₂- and B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table MLXI provides 782 compounds of formula Ibi wherein A_1 and B_1 together form -CH₂- and B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in
15 Table 1.

Table MLXII provides 782 compounds of formula Ibj wherein A_1 and B_1 together form -CH₂- and B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table MLXIII provides 782 compounds of formula Ibk wherein A_1 and B_1 together form -CH₂- and B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given
20 in Table 1.

Table MLXIV provides 782 compounds of formula Ibl wherein A_1 and B_1 together form -CH₂- and B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

25 Table MLXV provides 782 compounds of formula Ibm wherein A_1 and B_1 together form -CH₂- and B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table MLXVI provides 782 compounds of formula Ibn wherein A_1 and B_1 together form -CH₂- and B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given
30 in Table 1.

Table MLXVII provides 782 compounds of formula Ibo wherein A_1 and B_1 together form $-CH_2-$ and B_2 , B_3 and B_4 are all hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table MCI provides 782 compounds of formula Ia wherein A_1 is hydrogen, B_1 and B_3 together form a group- $-CH_2-CH_2-$, and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table MCII provides 782 compounds of formula Ib wherein A_1 is hydrogen, B_1 and B_3 together form a group- $-CH_2-CH_2-$, and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table MCIII provides 782 compounds of formula Ic wherein A_1 is hydrogen, B_1 and B_3 together form a group- $-CH_2-CH_2-$, and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table MCIV provides 782 compounds of formula Id wherein A_1 is hydrogen, B_1 and B_3 together form a group- $-CH_2-CH_2-$, and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table MCV provides 782 compounds of formula Ie wherein A_1 is hydrogen, B_1 and B_3 together form a group- $-CH_2-CH_2-$, and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table MCVI provides 782 compounds of formula If wherein A_1 is hydrogen, B_1 and B_3 together form a group- $-CH_2-CH_2-$, and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table MCVII provides 782 compounds of formula Ig wherein A_1 is hydrogen, B_1 and B_3 together form a group- $-CH_2-CH_2-$, and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table MCVIII provides 782 compounds of formula Ih wherein A_1 is hydrogen, B_1 and B_3 together form a group- $-CH_2-CH_2-$, and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table MCLIX provides 782 compounds of formula Ii wherein A_1 is hydrogen, B_1 and B_3 together form a group- $-CH_2-CH_2-$, and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table MCX provides 782 compounds of formula Ij wherein A₁ is hydrogen, B₁ and B₃ together form a group-CH₂-CH₂-, and B₂ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

5 Table MCXI provides 782 compounds of formula Ik wherein A₁ is hydrogen, B₁ and B₃ together form a group-CH₂-CH₂-, and B₂ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table MCXII provides 782 compounds of formula Il wherein A₁ is hydrogen, B₁ and B₃ together form a group-CH₂-CH₂-, and B₂ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

10 Table MCXIII provides 782 compounds of formula Im wherein A₁ is hydrogen, B₁ and B₃ together form a group-CH₂-CH₂-, and B₂ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table MCXIV provides 782 compounds of formula In wherein A₁ is hydrogen, B₁ and B₃ together form a group-CH₂-CH₂-, and B₂ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table MCXV provides 782 compounds of formula Io wherein A₁ is hydrogen, B₁ and B₃ together form a group-CH₂-CH₂-, and B₂ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

20 Table MCXVI provides 782 compounds of formula Ip wherein A₁ is hydrogen, B₁ and B₃ together form a group-CH₂-CH₂-, and B₂ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table MCXVII provides 782 compounds of formula Iq wherein A₁ is hydrogen, B₁ and B₃ together form a group-CH₂-CH₂-, and B₂ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

25 Table MCXVIII provides 782 compounds of formula Ir wherein A₁ is hydrogen, B₁ and B₃ together form a group-CH₂-CH₂-, and B₂ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table MCXIX provides 782 compounds of formula Is wherein A₁ is hydrogen, B₁ and B₃ together form a group-CH₂-CH₂-, and B₂ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

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Table MCXX provides 782 compounds of formula It wherein A_1 is hydrogen, B_1 and B_3 together form a group- $\text{CH}_2\text{-CH}_2\text{-}$, and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table MCXXI provides 782 compounds of formula Iu wherein A_1 is hydrogen, B_1 and B_3 together form a group- $\text{CH}_2\text{-CH}_2\text{-}$, and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table MCXXII provides 782 compounds of formula Iv wherein A_1 is hydrogen, B_1 and B_3 together form a group- $\text{CH}_2\text{-CH}_2\text{-}$, and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table MCXXIII provides 782 compounds of formula Iw wherein A_1 is hydrogen, B_1 and B_3 together form a group- $\text{CH}_2\text{-CH}_2\text{-}$, and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table MCXXIV provides 782 compounds of formula Ix wherein A_1 is hydrogen, B_1 and B_3 together form a group- $\text{CH}_2\text{-CH}_2\text{-}$, and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table MCXXV provides 782 compounds of formula Iy wherein A_1 is hydrogen, B_1 and B_3 together form a group- $\text{CH}_2\text{-CH}_2\text{-}$, and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table MCXXVI provides 782 compounds of formula Iz wherein A_1 is hydrogen, B_1 and B_3 together form a group- $\text{CH}_2\text{-CH}_2\text{-}$, and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table MCXXVII provides 782 compounds of formula Iaa wherein A_1 is hydrogen, B_1 and B_3 together form a group- $\text{CH}_2\text{-CH}_2\text{-}$, and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table MCXXVIII provides 782 compounds of formula Iab wherein A_1 is hydrogen, B_1 and B_3 together form a group- $\text{CH}_2\text{-CH}_2\text{-}$, and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table MCXXIX provides 782 compounds of formula Iac wherein A_1 is hydrogen, B_1 and B_3 together form a group- $\text{CH}_2\text{-CH}_2\text{-}$, and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table MCXXX provides 782 compounds of formula Iad wherein A₁ is hydrogen, B₁ and B₃ together form a group-CH₂-CH₂-, and B₂ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table MCXXXI provides 782 compounds of formula Iae wherein A₁ is hydrogen, B₁ and B₃ together form a group-CH₂-CH₂-, and B₂ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table MCXXXII provides 782 compounds of formula Iaf wherein A₁ is hydrogen, B₁ and B₃ together form a group-CH₂-CH₂-, and B₂ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table MCXXXIII provides 782 compounds of formula Iag wherein A₁ is hydrogen, B₁ and B₃ together form a group-CH₂-CH₂-, and B₂ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table MCXXXIV provides 782 compounds of formula Iah wherein A₁ is hydrogen, B₁ and B₃ together form a group-CH₂-CH₂-, and B₂ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table MCXXXV provides 782 compounds of formula Iai wherein A₁ is hydrogen, B₁ and B₃ together form a group-CH₂-CH₂-, and B₂ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table MCXXXVI provides 782 compounds of formula Iaj wherein A₁ is hydrogen, B₁ and B₃ together form a group-CH₂-CH₂-, and B₂ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table MCXXXVII provides 782 compounds of formula Iak wherein A₁ is hydrogen, B₁ and B₃ together form a group-CH₂-CH₂-, and B₂ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table MCXXXVIII provides 782 compounds of formula Ial wherein A₁ is hydrogen, B₁ and B₃ together form a group-CH₂-CH₂-, and B₂ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table MCXXXIX provides 782 compounds of formula Iam wherein A₁ is hydrogen, B₁ and B₃ together form a group-CH₂-CH₂-, and B₂ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table MCXL provides 782 compounds of formula Ian wherein A_1 is hydrogen, B_1 and B_3 together form a group- $\text{CH}_2\text{-CH}_2\text{-}$, and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

5 Table MCXLI provides 782 compounds of formula Iao wherein A_1 is hydrogen, B_1 and B_3 together form a group- $\text{CH}_2\text{-CH}_2\text{-}$, and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table MCXLII provides 782 compounds of formula Iap wherein A_1 is hydrogen, B_1 and B_3 together form a group- $\text{CH}_2\text{-CH}_2\text{-}$, and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

10 Table MCXLIII provides 782 compounds of formula Iaq wherein A_1 is hydrogen, B_1 and B_3 together form a group- $\text{CH}_2\text{-CH}_2\text{-}$, and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table MCXLIV provides 782 compounds of formula Iar wherein A_1 is hydrogen, B_1 and B_3 together form a group- $\text{CH}_2\text{-CH}_2\text{-}$, and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table MCXLV provides 782 compounds of formula Ias wherein A_1 is hydrogen, B_1 and B_3 together form a group- $\text{CH}_2\text{-CH}_2\text{-}$, and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

20 Table MCXLVI provides 782 compounds of formula Iat wherein A_1 is hydrogen, B_1 and B_3 together form a group- $\text{CH}_2\text{-CH}_2\text{-}$, and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table MCXLVII provides 782 compounds of formula Iau wherein A_1 is hydrogen, B_1 and B_3 together form a group- $\text{CH}_2\text{-CH}_2\text{-}$, and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

25 Table MCXLVIII provides 782 compounds of formula Iav wherein A_1 is hydrogen, B_1 and B_3 together form a group- $\text{CH}_2\text{-CH}_2\text{-}$, and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table MCXLIX provides 782 compounds of formula Iaw wherein A_1 is hydrogen, B_1 and B_3 together form a group- $\text{CH}_2\text{-CH}_2\text{-}$, and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

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Table MCL provides 782 compounds of formula Iax wherein A₁ is hydrogen, B₁ and B₃ together form a group-CH₂-CH₂-, and B₂ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table MCLI provides 782 compounds of formula Iay wherein A₁ is hydrogen, B₁ and B₃ together form a group-CH₂-CH₂-, and B₂ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table MCLII provides 782 compounds of formula Iaz wherein A₁ is hydrogen, B₁ and B₃ together form a group-CH₂-CH₂-, and B₂ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table MCLIII provides 782 compounds of formula Iba wherein A₁ is hydrogen, B₁ and B₃ together form a group-CH₂-CH₂-, and B₂ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table MCLIV provides 782 compounds of formula Ibb wherein A₁ is hydrogen, B₁ and B₃ together form a group-CH₂-CH₂-, and B₂ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table MCLV provides 782 compounds of formula Ibc wherein A₁ is hydrogen, B₁ and B₃ together form a group-CH₂-CH₂-, and B₂ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table MCLVI provides 782 compounds of formula Ibd wherein A₁ is hydrogen, B₁ and B₃ together form a group-CH₂-CH₂-, and B₂ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table MCLVII provides 782 compounds of formula Ibe wherein A₁ is hydrogen, B₁ and B₃ together form a group-CH₂-CH₂-, and B₂ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table MCLVIII provides 782 compounds of formula Ibf wherein A₁ is hydrogen, B₁ and B₃ together form a group-CH₂-CH₂-, and B₂ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table MCLIX provides 782 compounds of formula Ibg wherein A₁ is hydrogen, B₁ and B₃ together form a group-CH₂-CH₂-, and B₂ and B₄ are both hydrogen and the values of R^{4a}, R^{4b}, R^{4c}, R^{4d} and R⁸ are given in Table 1.

Table MCLX provides 782 compounds of formula Ibh wherein A_1 is hydrogen, B_1 and B_3 together form a group- $\text{CH}_2\text{-CH}_2\text{-}$, and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

5 Table MCLXI provides 782 compounds of formula Ibi wherein A_1 is hydrogen, B_1 and B_3 together form a group- $\text{CH}_2\text{-CH}_2\text{-}$, and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table MCLXII provides 782 compounds of formula Ib j wherein A_1 is hydrogen, B_1 and B_3 together form a group- $\text{CH}_2\text{-CH}_2\text{-}$, and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

10 Table MCLXIII provides 782 compounds of formula Ib k wherein A_1 is hydrogen, B_1 and B_3 together form a group- $\text{CH}_2\text{-CH}_2\text{-}$, and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table MCLXIV provides 782 compounds of formula Ib l wherein A_1 is hydrogen, B_1 and B_3 together form a group- $\text{CH}_2\text{-CH}_2\text{-}$, and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table MCLXV provides 782 compounds of formula Ib m wherein A_1 is hydrogen, B_1 and B_3 together form a group- $\text{CH}_2\text{-CH}_2\text{-}$, and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table MCLXVI provides 782 compounds of formula Ib n wherein A_1 is hydrogen, B_1 and B_3 together form a group- $\text{CH}_2\text{-CH}_2\text{-}$, and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

Table MCLXVII provides 782 compounds of formula Ib o wherein A_1 is hydrogen, B_1 and B_3 together form a group- $\text{CH}_2\text{-CH}_2\text{-}$, and B_2 and B_4 are both hydrogen and the values of R^{4a} , R^{4b} , R^{4c} , R^{4d} and R^8 are given in Table 1.

25 Mass spectra data were obtained for selected compounds of Tables I to MCLXVII using LCMS: LC5: 254nm - gradient 10% A to 100% B A= $\text{H}_2\text{O}+0.01\%\text{HCOOH}$ B= $\text{CH}_3\text{CN}/\text{CH}_3\text{OH}+0.01\%\text{HCOOH}$ positive electrospray 150-1000 m/z.

The data are shown in Table 2.

Table 2

Compound No	M.p. (°C)	LCMS (Ret. Time, min)	MS data
III.49	91-93	2.37	526/528
CIII.49	110	2.26	528/530
CCIII.49	96-97	3.22	530/532
CCCIV.49	100-101	4.01	548

5

The compounds of the invention may be synthesised by various methods. For example the compounds of formula 1 may be synthesised as described in Scheme 1.

Thus a compound of formula 1 may be synthesised from a compound of formula 2 by reaction with an acid such as trifluoroacetic acid at ambient temperature in an organic solvent such as dichloromethane, chloroform or 1,2-dichloroethane followed by neutralisation of the reaction mixture with an aqueous solution of an inorganic base such as sodium carbonate, sodium bicarbonate or similar compound. The intermediate thus formed reacts with an alkylating agent of the formula R⁸-L, where L is chloride, bromide, iodide or a sulfonate (e.g. mesylate or tosylate) or similar leaving group at a temperature of between ambient temperature and 100°C, typically ambient temperature, in an organic solvent such as acetonitrile, dimethylformamide, dichloromethane, chloroform or 1,2-dichloroethane in the presence of a tertiary amine base such as triethylamine or diisopropylethylamine and optionally catalysed by halide salts such as sodium iodide, potassium iodide or tetrabutylammonium iodide.

Alternatively a compound of formula 2, after removal of the t-butoxycarbonyl protecting group as described above, may be reacted with an aldehyde of the formula RCHO at a temperature between ambient temperature and 100°C in an organic solvent such as tetrahydrofuran or ethanol or mixtures of solvents in the presence of a reducing agent such as borane-pyridine complex, sodium borohydride, sodium (triacetoxy)borohydride, sodium cyanoborohydride or such like, to produce a compound of formula 1 where R⁸ is CH₂-R.

In an alternative method compounds of formula 1 may be obtained from compounds of formula 6 by reaction with a suitable electrophilic species. Compounds of formula 1 where

Y is a carbonyl group may be formed by the reaction of compounds of formula 6 with a carboxylic acid derivative of formula $R1-C(O)-Z$ where Z is chloride, hydroxy, alkoxy or acyloxy at a temperature between 0°C and 150°C optionally in an organic solvent such as dichloromethane, chloroform or 1,2-dichloroethane, optionally in the presence of a tertiary amine base such as triethylamine or diisopropylethylamine and optionally in the presence of a coupling agent such as dicyclohexylcarbodiimide. Compounds of formula 1 where Y is a carbonyl group and R1 is an amino substituent of formula $R'-NH-$ may be formed by the reaction of compounds of formula 6 with an isocyanate of formula $R'-N=C=O$ under similar conditions. Compounds of formula 1 where Y is a group of formula $S(O)_q$ may be formed from compounds of formula 6 by treatment with compounds of formula $R1-S(O)_q-Cl$ under similar conditions. Compounds of formula 1 where Y is a thiocarbonyl group and R1 is an amino substituent of formula $R'-NH-$ may be formed by the reaction of compounds of formula 6 with an isothiocyanate of formula $R'-N=C=S$ under similar conditions. Alternatively compounds of formula 1 where Y is a thiocarbonyl group and R1 is a carbon substituent may be formed by treatment of compounds of formula 1 where Y is a carbonyl group and R1 is a carbon substituent with a suitable thionating agent such as Lawesson's reagent.

In the above procedures, acid derivatives of the formula $R1-C(O)-Z$, isocyanates of formula $R'-N=C=O$, isothiocyanates of formula $R'-N=C=S$ and sulfur electrophiles of formula $R1-S(O)_q-Cl$ are either known compounds or may be formed from known compounds by known methods by a person skilled in the art.

A compound of formula 2 may be obtained from a compound of formula 3 by reaction with a suitable electrophilic species, as described above.

Compounds of formula 3 may be obtained by reacting compounds of formula 4 with compounds of formula 10 at a temperature of between 0°C and 100°C in an organic solvent such as dichloromethane, chloroform or 1,2-dichloroethane in the presence of an acid such as hydrochloric acid or trifluoroacetic acid and optionally a co-solvent such as water, methanol or ethanol. The intermediates formed are subsequently treated with a reducing agent such as sodium borohydride, sodium (triacetoxyl)borohydride, sodium cyanoborohydride, triethylsilane or similar at ambient temperature in organic solvent such as ethanol or chloroform or with a nucleophile $R3-M$ (where M is a metallic species; $R3-M$ is for example

a Grignard reagent). The basic procedure is described in Tetrahedron (1997), 53, 10983-10992.

Similarly, compounds of formula 6 may be synthesised by reacting compounds of formula 7 with compounds of formula 10 using the conditions described above.

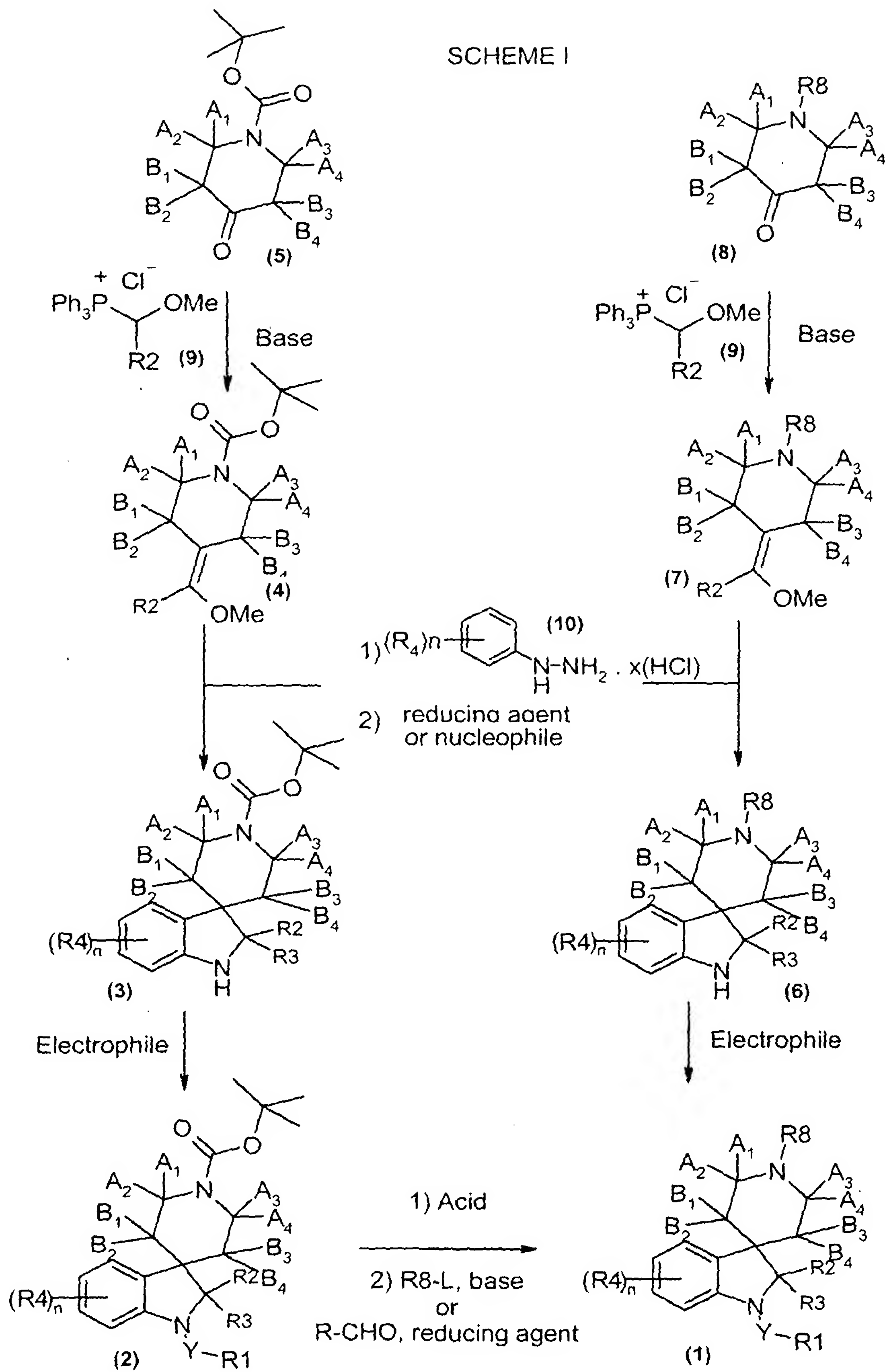
5 Compounds of formula 4 may be obtained from compounds of formula 5 by reaction with a 1-alkoxy substituted phosphonium salt of formula 9 such as methoxymethyl(triphenyl)phosphonium chloride and a base such as potassium *tert*-butoxide at a temperature of 0°C to 80°C in tetrahydrofuran.

10 Similarly, compounds of formula 7 may be synthesised from compounds of formula 8 using the conditions described above.

Compounds of formula 5, 8 and 10 are either known compounds or may be formed from known compounds by known methods by a person skilled in the art.

Certain compounds of formula 2, 3 and 6 are novel and as such form a further aspect of the invention.

SCHEME I

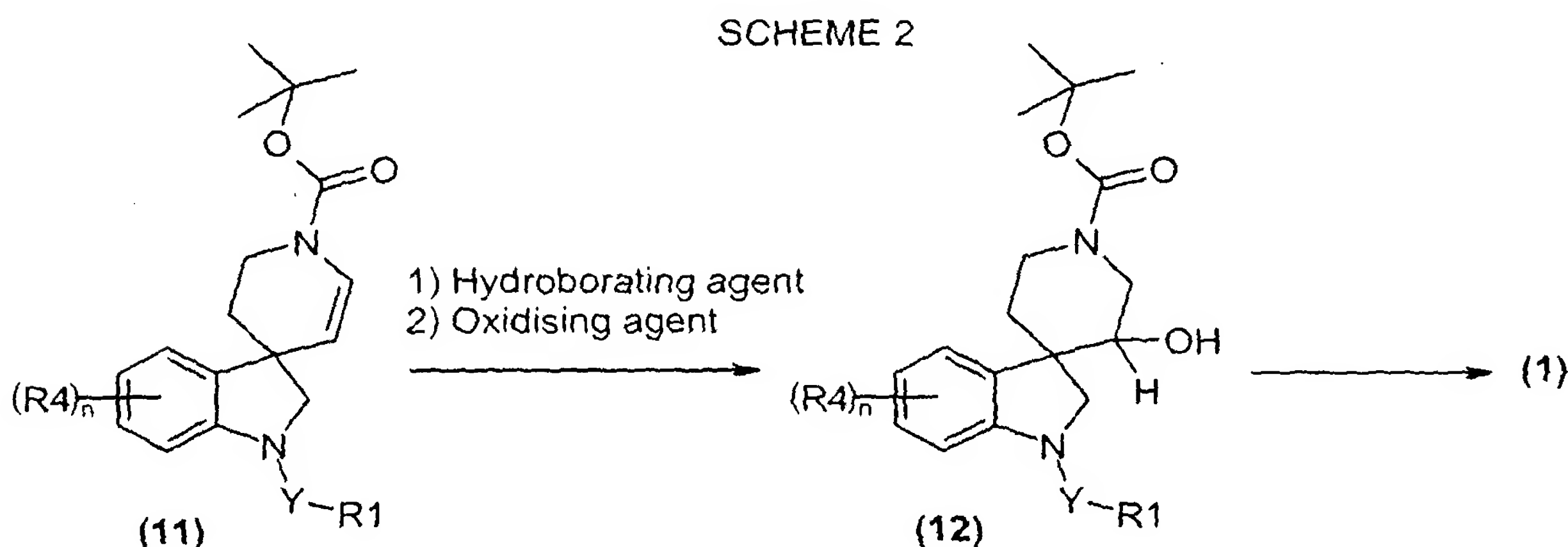


In an alternative method a compound of formula 1 wherein A_1 , A_2 , A_3 , A_4 , B_2 , B_3 and B_4 are H and B_1 is OH may be obtained from a compound of formula 12 by removal of the t-butoxycarbonyl protecting group and reaction with an alkylating agent R8-L as described previously. A Compound of formula 12 may be obtained from an intermediate of formula 11

5 by reaction with an hydroborating agent such as borane in an organic solvent such as dichloromethane or tetrahydrofuran at a temperature of between 0°C to 80°C, followed by treatment with an oxidising agent such as hydrogen peroxide in the presence of water and a base such as sodium hydroxide at a temperature of between 0°C to 100°C (Scheme 2).

The skilled person will readily recognise that it is possible to convert one compound

10 of formula 12 to other compounds of formula 1.

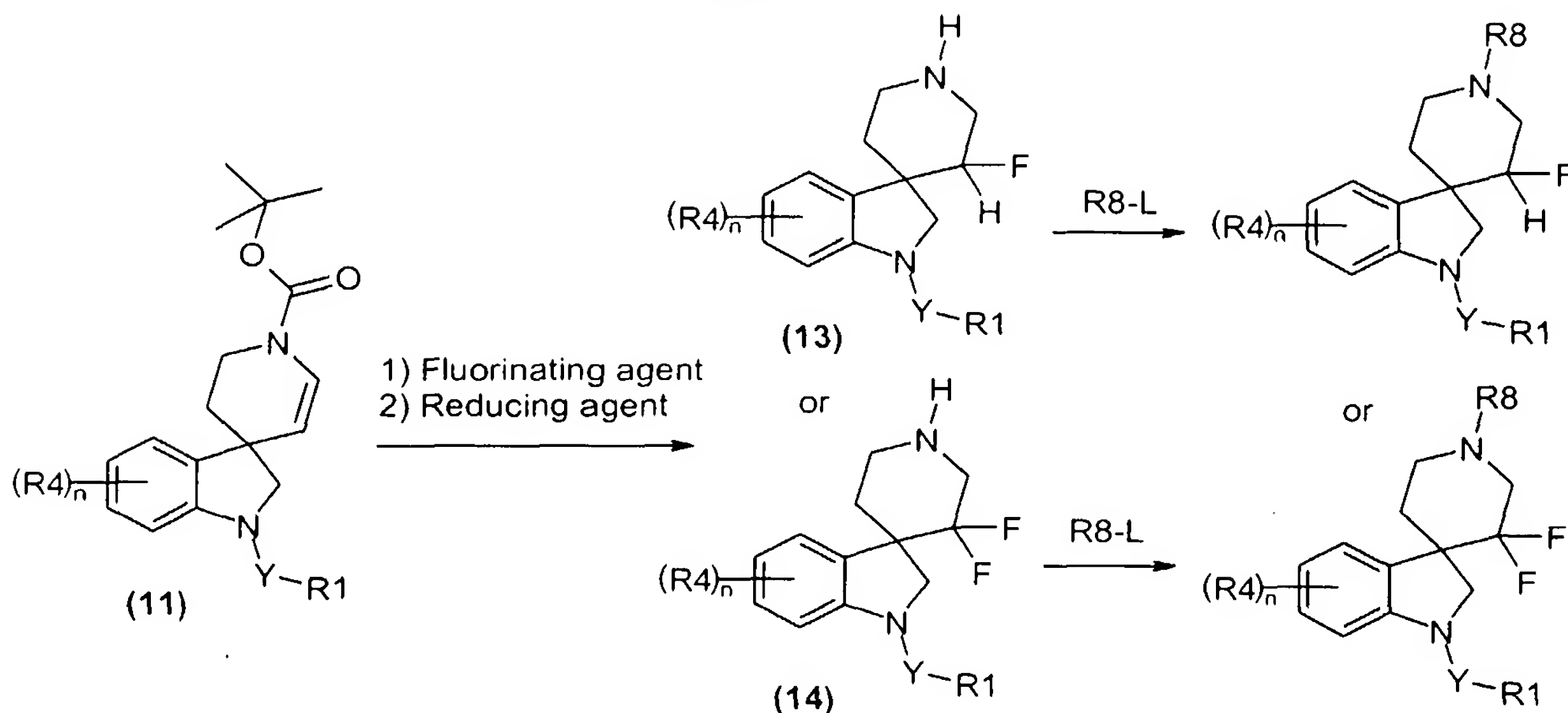


In another alternative method, a compound of formula 11 may be reacted with a

15 suitable fluorinating species, such as Selectfluor[®], followed by reaction with a reducing agent such as triethylsilane in the presence of an acid such as trifluoroacetic acid to provide a compound of formula 13 or a compound of formula 14. Compounds of formula 13 (or 14) may be converted into compounds of formula 1 wherein A_1 , A_2 , A_3 , A_4 , B_2 , B_3 and B_4 are H and B_1 is F (i.e. A_1 , A_2 , A_3 , A_4 , B_3 and B_4 are H, B_1 and B_2 are F) by reaction with an

20 alkylating agent of the formula R8-L as described previously (Scheme 3).

SCHEME 3



Compounds of formula 11 may be synthesised by the method outlined on Scheme 4.

Thus a compound of formula 11 may be synthesised from a compound of formula 15
 5 by reacting with an electrophilic species as described previously.

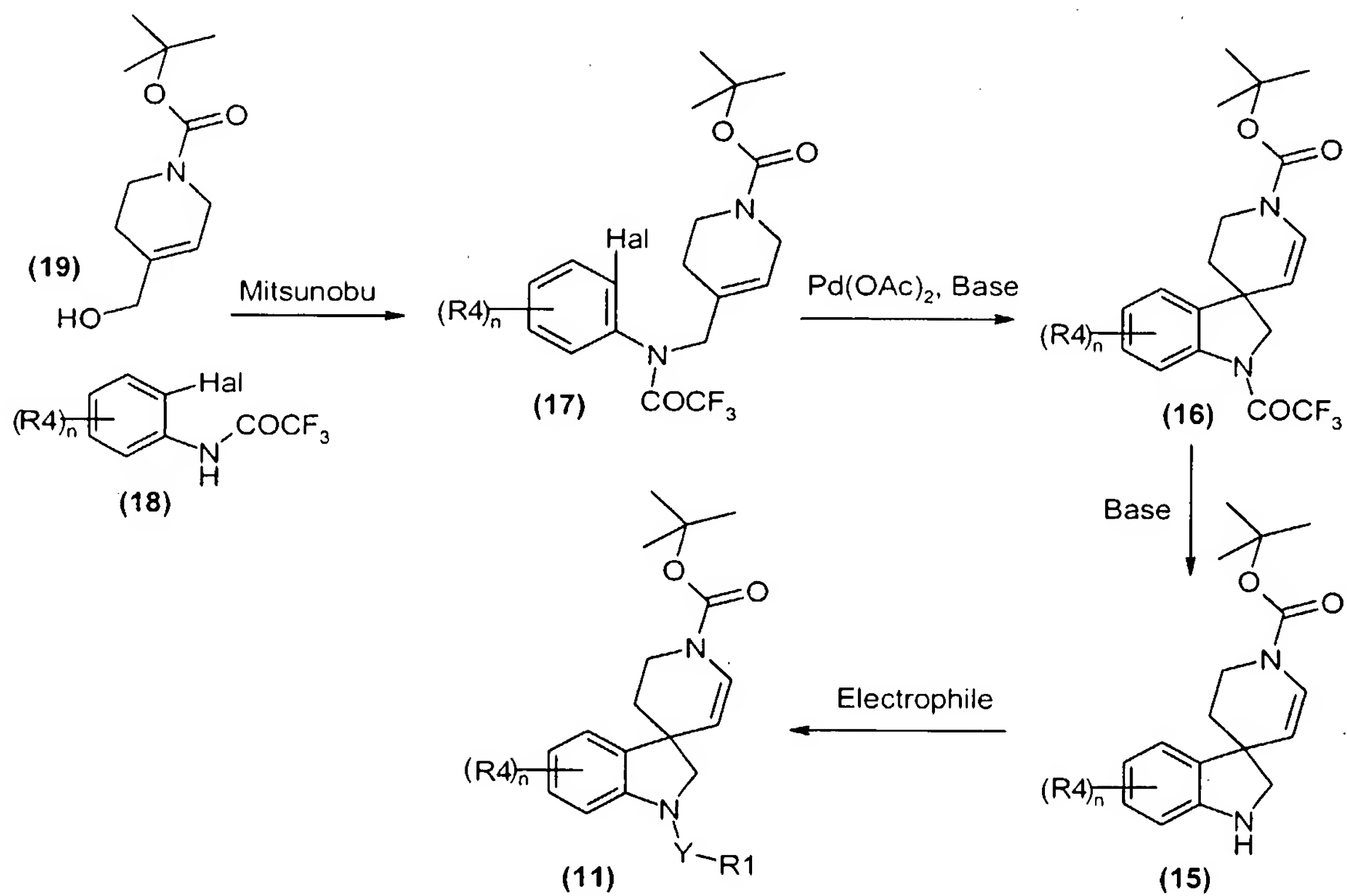
A compound of formula 15 may be prepared from a compound of formula 16 by treatment with a suitable base such as potassium carbonate at a temperature of between 0°C to 80°C in an organic solvent such as methanol or ethanol in combination with water.

A compound of formula 16 may be synthesised by cyclising a compound of formula
 10 17 under Heck conditions, typically in the presence of a catalyst such as palladium(II) acetate, optionally a ligand such as triphenylphosphine or/and an additive such as tetrabutylammonium bromide and a base such as triethylamine in an organic solvent such as tetrahydrofuran, acetonitrile, dimethylformamide, N-methyl-pyrrolidinone or dimethylacetamide at a temperature of between 20°C to 140°C.

Compounds of formula 17 may be synthesised by coupling compounds of formula 18
 15 with the known alcohol 19 (*J. Org. Chem.* **2001**, 66, 5545-5551) under Mitsunobu conditions, typically using a phosphine such as triphenylphosphine and an azo compound such as diethylazodicarboxylate or diisopropylazodicarboxylate in an organic solvent such as tetrahydrofuran or toluene at a temperature of between 0°C to 80°C.

Compounds of formula 18 are either known compounds or may be formed from
 20 known compounds by known methods by a person skilled in the art.

SCHEME 4



The compounds of formula (I) can be used to combat and control infestations of insect pests such as Lepidoptera, Diptera, Hemiptera, Thysanoptera, Orthoptera, Dictyoptera, Coleoptera, Siphonaptera, Hymenoptera and Isoptera and also other invertebrate pests, for example, acarine, nematode and mollusc pests. Insects, acarines, nematodes and molluscs are hereinafter collectively referred to as pests. The pests which may be combated and controlled by the use of the invention compounds include those pests associated with agriculture (which term includes the growing of crops for food and fibre products), horticulture and animal husbandry, companion animals, forestry and the storage of products of vegetable origin (such as fruit, grain and timber); those pests associated with the damage of man-made structures and the transmission of diseases of man and animals; and also nuisance pests (such as flies).

Examples of pest species which may be controlled by the compounds of formula (I) include: *Myzus persicae* (aphid), *Aphis gossypii* (aphid), *Aphis fabae* (aphid), *Lygus* spp. (capsids), *Dysdercus* spp. (capsids), *Nilaparvata lugens* (planthopper), *Nephotettix inciticeps* (leafhopper), *Nezara* spp. (stinkbugs), *Euschistus* spp. (stinkbugs), *Leptocorisa* spp. (stinkbugs), *Frankliniella occidentalis* (thrip), *Thrips* spp. (thrips), *Leptinotarsa decemlineata* (Colorado potato beetle), *Anthonomus grandis* (boll weevil), *Aonidiella* spp. (scale insects), *Trialeurodes* spp. (white flies), *Bemisia tabaci* (white fly), *Ostrinia nubilalis* (European corn borer), *Spodoptera littoralis* (cotton leafworm), *Heliothis virescens* (tobacco budworm), *Helicoverpa armigera* (cotton bollworm), *Helicoverpa zea* (cotton bollworm), *Sylepta derogata* (cotton leaf roller), *Pieris brassicae* (white butterfly), *Plutella xylostella* (diamond back moth), *Agrotis* spp. (cutworms), *Chilo suppressalis* (rice stem borer), *Locusta migratoria* (locust), *Chortiocetes terminifera* (locust), *Diabrotica* spp. (rootworms), *Panonychus ulmi* (European red mite), *Panonychus citri* (citrus red mite), *Tetranychus urticae* (two-spotted spider mite), *Tetranychus cinnabarinus* (carmine spider mite), *Phyllocoptruta oleivora* (citrus rust mite), *Polyphagotarsonemus latus* (broad mite), *Brevipalpus* spp. (flat mites), *Boophilus microplus* (cattle tick), *Dermacentor variabilis* (American dog tick), *Ctenocephalides felis* (cat flea), *Liriomyza* spp. (leafminer), *Musca domestica* (housefly), *Aedes aegypti* (mosquito), *Anopheles* spp. (mosquitoes), *Culex* spp. (mosquitoes), *Lucillia* spp. (blowflies), *Blattella germanica* (cockroach), *Periplaneta americana* (cockroach), *Blatta orientalis* (cockroach), termites of the Mastotermitidae (for example *Mastotermes* spp.), the Kalotermitidae (for example *Neotermes* spp.), the

Rhinotermitidae (for example *Coptotermes formosanus*, *Reticulitermes flavipes*, *R. speratu*, *R. virginicus*, *R. hesperus*, and *R. santonensis*) and the Termitidae (for example *Globitermes sulphureus*), *Solenopsis geminata* (fire ant), *Monomorium pharaonis* (pharaoh's ant), *Damalinia* spp. and *Linognathus* spp. (biting and sucking lice), *Meloidogyne* spp. (root knot nematodes), *Globodera* spp. and *Heterodera* spp. (cyst nematodes), *Pratylenchus* spp. (lesion nematodes), *Rhodopholus* spp. (banana burrowing nematodes), *Tylenchulus* spp. (citrus nematodes), *Haemonchus contortus* (barber pole worm), *Caenorhabditis elegans* (vinegar eelworm), *Trichostrongylus* spp. (gastro intestinal nematodes) and *Deroceras reticulatum* (slug).

10 The invention therefore provides a method of combating and controlling insects, acarines, nematodes or molluscs which comprises applying an insecticidally, acaricidally, nematicidally or molluscicidally effective amount of a compound of formula (I), or a composition containing a compound of formula (I), to a pest, a locus of pest, or to a plant susceptible to attack by a pest, The compounds of formula (I) are preferably used against
15 insects, acarines or nematodes.

 The term "plant" as used herein includes seedlings, bushes and trees.

 In order to apply a compound of formula (I) as an insecticide, acaricide, nematicide or molluscicide to a pest, a locus of pest, or to a plant susceptible to attack by a pest, a compound of formula (I) is usually formulated into a composition which includes, in addition
20 to the compound of formula (I), a suitable inert diluent or carrier and, optionally, a surface active agent (SFA). SFAs are chemicals which are able to modify the properties of an interface (for example, liquid/solid, liquid/air or liquid/liquid interfaces) by lowering the interfacial tension and thereby leading to changes in other properties (for example dispersion, emulsification and wetting). It is preferred that all compositions (both solid and liquid
25 formulations) comprise, by weight, 0.0001 to 95%, more preferably 1 to 85%, for example 5 to 60%, of a compound of formula (I). The composition is generally used for the control of pests such that a compound of formula (I) is applied at a rate of from 0.1g to 10kg per hectare, preferably from 1g to 6kg per hectare, more preferably from 1g to 1kg per hectare.

 When used in a seed dressing, a compound of formula (I) is used at a rate of 0.0001g
30 to 10g (for example 0.001g or 0.05g), preferably 0.005g to 10g, more preferably 0.005g to 4g, per kilogram of seed.

In another aspect the present invention provides an insecticidal, acaricidal, nematocidal or molluscicidal composition comprising an insecticidally, acaricidally, nematocidally or molluscicidally effective amount of a compound of formula (I) and a suitable carrier or diluent therefor. The composition is preferably an insecticidal, acaricidal, nematocidal or molluscicidal composition.

In a still further aspect the invention provides a method of combating and controlling pests at a locus which comprises treating the pests or the locus of the pests with an insecticidally, acaricidally, nematocidally or molluscicidally effective amount of a composition comprising a compound of formula (I). The compounds of formula (I) are preferably used against insects, acarines or nematodes.

The compositions can be chosen from a number of formulation types, including dustable powders (DP), soluble powders (SP), water soluble granules (SG), water dispersible granules (WG), wettable powders (WP), granules (GR) (slow or fast release), soluble concentrates (SL), oil miscible liquids (OL), ultra low volume liquids (UL), emulsifiable concentrates (EC), dispersible concentrates (DC), emulsions (both oil in water (EW) and water in oil (EO)), micro-emulsions (ME), suspension concentrates (SC), aerosols, fogging/smoke formulations, capsule suspensions (CS) and seed treatment formulations. The formulation type chosen in any instance will depend upon the particular purpose envisaged and the physical, chemical and biological properties of the compound of formula (I).

Dustable powders (DP) may be prepared by mixing a compound of formula (I) with one or more solid diluents (for example natural clays, kaolin, pyrophyllite, bentonite, alumina, montmorillonite, kieselguhr, chalk, diatomaceous earths, calcium phosphates, calcium and magnesium carbonates, sulphur, lime, flours, talc and other organic and inorganic solid carriers) and mechanically grinding the mixture to a fine powder.

Soluble powders (SP) may be prepared by mixing a compound of formula (I) with one or more water-soluble inorganic salts (such as sodium bicarbonate, sodium carbonate or magnesium sulphate) or one or more water-soluble organic solids (such as a polysaccharide) and, optionally, one or more wetting agents, one or more dispersing agents or a mixture of said agents to improve water dispersibility/solubility. The mixture is then ground to a fine powder. Similar compositions may also be granulated to form water soluble granules (SG).

Wettable powders (WP) may be prepared by mixing a compound of formula (I) with one or more solid diluents or carriers, one or more wetting agents and, preferably, one or

more dispersing agents and, optionally, one or more suspending agents to facilitate the dispersion in liquids. The mixture is then ground to a fine powder. Similar compositions may also be granulated to form water dispersible granules (WG).

Granules (GR) may be formed either by granulating a mixture of a compound of formula (I) and one or more powdered solid diluents or carriers, or from pre-formed blank granules by absorbing a compound of formula (I) (or a solution thereof, in a suitable agent) in a porous granular material (such as pumice, attapulgite clays, fuller's earth, kieselguhr, diatomaceous earths or ground corn cobs) or by adsorbing a compound of formula (I) (or a solution thereof, in a suitable agent) on to a hard core material (such as sands, silicates, mineral carbonates, sulphates or phosphates) and drying if necessary. Agents which are commonly used to aid absorption or adsorption include solvents (such as aliphatic and aromatic petroleum solvents, alcohols, ethers, ketones and esters) and sticking agents (such as polyvinyl acetates, polyvinyl alcohols, dextrans, sugars and vegetable oils). One or more other additives may also be included in granules (for example an emulsifying agent, wetting agent or dispersing agent).

Dispersible Concentrates (DC) may be prepared by dissolving a compound of formula (I) in water or an organic solvent, such as a ketone, alcohol or glycol ether. These solutions may contain a surface active agent (for example to improve water dilution or prevent crystallisation in a spray tank).

Emulsifiable concentrates (EC) or oil-in-water emulsions (EW) may be prepared by dissolving a compound of formula (I) in an organic solvent (optionally containing one or more wetting agents, one or more emulsifying agents or a mixture of said agents). Suitable organic solvents for use in ECs include aromatic hydrocarbons (such as alkylbenzenes or alkylnaphthalenes, exemplified by SOLVESSO 100, SOLVESSO 150 and SOLVESSO 200; SOLVESSO is a Registered Trade Mark), ketones (such as cyclohexanone or methylcyclohexanone) and alcohols (such as benzyl alcohol, furfuryl alcohol or butanol), N-alkylpyrrolidones (such as N-methylpyrrolidone or N-octylpyrrolidone), dimethyl amides of fatty acids (such as C₈-C₁₀ fatty acid dimethylamide) and chlorinated hydrocarbons. An EC product may spontaneously emulsify on addition to water, to produce an emulsion with sufficient stability to allow spray application through appropriate equipment. Preparation of an EW involves obtaining a compound of formula (I) either as a liquid (if it is not a liquid at room temperature, it may be melted at a reasonable temperature, typically below 70°C) or in

solution (by dissolving it in an appropriate solvent) and then emulsifying the resultant liquid or solution into water containing one or more SFAs, under high shear, to produce an emulsion. Suitable solvents for use in EWs include vegetable oils, chlorinated hydrocarbons (such as chlorobenzenes), aromatic solvents (such as alkylbenzenes or alkylnaphthalenes) and other appropriate organic solvents which have a low solubility in water.

Microemulsions (ME) may be prepared by mixing water with a blend of one or more solvents with one or more SFAs, to produce spontaneously a thermodynamically stable isotropic liquid formulation. A compound of formula (I) is present initially in either the water or the solvent/SFA blend. Suitable solvents for use in MEs include those hereinbefore described for use in ECs or in EWs. An ME may be either an oil-in-water or a water-in-oil system (which system is present may be determined by conductivity measurements) and may be suitable for mixing water-soluble and oil-soluble pesticides in the same formulation. An ME is suitable for dilution into water, either remaining as a microemulsion or forming a conventional oil-in-water emulsion.

Suspension concentrates (SC) may comprise aqueous or non-aqueous suspensions of finely divided insoluble solid particles of a compound of formula (I). SCs may be prepared by ball or bead milling the solid compound of formula (I) in a suitable medium, optionally with one or more dispersing agents, to produce a fine particle suspension of the compound. One or more wetting agents may be included in the composition and a suspending agent may be included to reduce the rate at which the particles settle. Alternatively, a compound of formula (I) may be dry milled and added to water, containing agents hereinbefore described, to produce the desired end product.

Aerosol formulations comprise a compound of formula (I) and a suitable propellant (for example *n*-butane). A compound of formula (I) may also be dissolved or dispersed in a suitable medium (for example water or a water miscible liquid, such as *n*-propanol) to provide compositions for use in non-pressurised, hand-actuated spray pumps.

A compound of formula (I) may be mixed in the dry state with a pyrotechnic mixture to form a composition suitable for generating, in an enclosed space, a smoke containing the compound.

Capsule suspensions (CS) may be prepared in a manner similar to the preparation of EW formulations but with an additional polymerisation stage such that an aqueous dispersion of oil droplets is obtained, in which each oil droplet is encapsulated by a polymeric shell and

contains a compound of formula (I) and, optionally, a carrier or diluent therefor. The polymeric shell may be produced by either an interfacial polycondensation reaction or by a coacervation procedure. The compositions may provide for controlled release of the compound of formula (I) and they may be used for seed treatment. A compound of formula (I) may also be formulated in a biodegradable polymeric matrix to provide a slow, controlled release of the compound.

A composition may include one or more additives to improve the biological performance of the composition (for example by improving wetting, retention or distribution on surfaces; resistance to rain on treated surfaces; or uptake or mobility of a compound of formula (I)). Such additives include surface active agents, spray additives based on oils, for example certain mineral oils or natural plant oils (such as soy bean and rape seed oil), and blends of these with other bio-enhancing adjuvants (ingredients which may aid or modify the action of a compound of formula (I)).

A compound of formula (I) may also be formulated for use as a seed treatment, for example as a powder composition, including a powder for dry seed treatment (DS), a water soluble powder (SS) or a water dispersible powder for slurry treatment (WS), or as a liquid composition, including a flowable concentrate (FS), a solution (LS) or a capsule suspension (CS). The preparations of DS, SS, WS, FS and LS compositions are very similar to those of, respectively, DP, SP, WP, SC and DC compositions described above. Compositions for treating seed may include an agent for assisting the adhesion of the composition to the seed (for example a mineral oil or a film-forming barrier).

Wetting agents, dispersing agents and emulsifying agents may be surface SFAs of the cationic, anionic, amphoteric or non-ionic type.

Suitable SFAs of the cationic type include quaternary ammonium compounds (for example cetyltrimethyl ammonium bromide), imidazolines and amine salts.

Suitable anionic SFAs include alkali metals salts of fatty acids, salts of aliphatic monoesters of sulphuric acid (for example sodium lauryl sulphate), salts of sulphonated aromatic compounds (for example sodium dodecylbenzenesulphonate, calcium dodecylbenzenesulphonate, butylnaphthalene sulphonate and mixtures of sodium di-*isopropyl*- and tri-*isopropyl*-naphthalene sulphonates), ether sulphates, alcohol ether sulphates (for example sodium laureth-3-sulphate), ether carboxylates (for example sodium laureth-3-carboxylate), phosphate esters (products from the reaction between one or more

fatty alcohols and phosphoric acid (predominately mono-esters) or phosphorus pentoxide (predominately di-esters), for example the reaction between lauryl alcohol and tetraphosphoric acid; additionally these products may be ethoxylated), sulphosuccinamates, paraffin or olefine sulphonates, taurates and lignosulphonates.

5 Suitable SFAs of the amphoteric type include betaines, propionates and glycines.

 Suitable SFAs of the non-ionic type include condensation products of alkylene oxides, such as ethylene oxide, propylene oxide, butylene oxide or mixtures thereof, with fatty alcohols (such as oleyl alcohol or cetyl alcohol) or with alkylphenols (such as octylphenol, nonylphenol or octylcresol); partial esters derived from long chain fatty acids or hexitol
10 anhydrides; condensation products of said partial esters with ethylene oxide; block polymers (comprising ethylene oxide and propylene oxide); alkanolamides; simple esters (for example fatty acid polyethylene glycol esters); amine oxides (for example lauryl dimethyl amine oxide); and lecithins.

 Suitable suspending agents include hydrophilic colloids (such as polysaccharides,
15 polyvinylpyrrolidone or sodium carboxymethylcellulose) and swelling clays (such as bentonite or attapulgite).

 A compound of formula (I) may be applied by any of the known means of applying pesticidal compounds. For example, it may be applied, formulated or unformulated, to the pests or to a locus of the pests (such as a habitat of the pests, or a growing plant liable to
20 infestation by the pests) or to any part of the plant, including the foliage, stems, branches or roots, to the seed before it is planted or to other media in which plants are growing or are to be planted (such as soil surrounding the roots, the soil generally, paddy water or hydroponic culture systems), directly or it may be sprayed on, dusted on, applied by dipping, applied as a cream or paste formulation, applied as a vapour or applied through distribution or
25 incorporation of a composition (such as a granular composition or a composition packed in a water-soluble bag) in soil or an aqueous environment.

 A compound of formula (I) may also be injected into plants or sprayed onto vegetation using electrodynamic spraying techniques or other low volume methods, or applied by land or aerial irrigation systems.

30 Compositions for use as aqueous preparations (aqueous solutions or dispersions) are generally supplied in the form of a concentrate containing a high proportion of the active ingredient, the concentrate being added to water before use. These concentrates, which may

include DCs, SCs, ECs, EWs, MEs SGs, SPs, WPs, WGs and CSs, are often required to withstand storage for prolonged periods and, after such storage, to be capable of addition to water to form aqueous preparations which remain homogeneous for a sufficient time to enable them to be applied by conventional spray equipment. Such aqueous preparations may contain varying amounts of a compound of formula (I) (for example 0.0001 to 10%, by weight) depending upon the purpose for which they are to be used.

A compound of formula (I) may be used in mixtures with fertilisers (for example nitrogen-, potassium- or phosphorus-containing fertilisers). Suitable formulation types include granules of fertiliser. The mixtures suitably contain up to 25% by weight of the compound of formula (I).

The invention therefore also provides a fertiliser composition comprising a fertiliser and a compound of formula (I).

The compositions of this invention may contain other compounds having biological activity, for example micronutrients or compounds having fungicidal activity or which possess plant growth regulating, herbicidal, insecticidal, nematocidal or acaricidal activity.

The compound of formula (I) may be the sole active ingredient of the composition or it may be admixed with one or more additional active ingredients such as a pesticide, fungicide, synergist, herbicide or plant growth regulator where appropriate. An additional active ingredient may: provide a composition having a broader spectrum of activity or increased persistence at a locus; synergise the activity or complement the activity (for example by increasing the speed of effect or overcoming repellency) of the compound of formula (I); or help to overcome or prevent the development of resistance to individual components. The particular additional active ingredient will depend upon the intended utility of the composition. Examples of suitable pesticides include the following:

- a) Pyrethroids, such as permethrin, cypermethrin, fenvalerate, esfenvalerate, deltamethrin, cyhalothrin (in particular lambda-cyhalothrin), bifenthrin, fenpropathrin, cyfluthrin, tefluthrin, fish safe pyrethroids (for example ethofenprox), natural pyrethrin, tetramethrin, s-bioallethrin, fenfluthrin, prallethrin or 5-benzyl-3-furylmethyl-(E)-(1R,3S)-2,2-dimethyl-3-(2-oxothiolan-3-ylidenemethyl)cyclopropane carboxylate;
- b) Organophosphates, such as, profenofos, sulprofos, acephate, methyl parathion, azinphos-methyl, demeton-s-methyl, heptenophos, thiometon, fenamiphos, monocrotophos, profenofos, triazophos, methamidophos, dimethoate, phosphamidon, malathion, chlorpyrifos,

phosalone, terbufos, fensulfothion, fonofos, phorate, phoxim, pirimiphos-methyl, pirimiphos-ethyl, fenitrothion, fosthiazate or diazinon;

c) Carbamates (including aryl carbamates), such as pirimicarb, triazamate, cloethocarb, carbofuran, furathiocarb, ethiofencarb, aldicarb, thiofurox, carbosulfan, bendiocarb,
5 fenobucarb, propoxur, methomyl or oxamyl;

d) Benzoyl ureas, such as diflubenzuron, triflumuron, hexaflumuron, flufenoxuron or chlorfluazuron;

e) Organic tin compounds, such as cyhexatin, fenbutatin oxide or azocyclotin;

f) Pyrazoles, such as tebufenpyrad and fenpyroximate;

10 g) Macrolides, such as avermectins or milbemycins, for example abamectin, emamectin benzoate, ivermectin, milbemycin, spinosad or azadirachtin;

h) Hormones or pheromones;

i) Organochlorine compounds such as endosulfan, benzene hexachloride, DDT, chlordane or dieldrin;

15 j) Amidines, such as chlordimeform or amitraz;

k) Fumigant agents, such as chloropicrin, dichloropropane, methyl bromide or metam;

l) Chloronicotinyl compounds such as imidacloprid, thiacloprid, acetamiprid, nitenpyram or thiamethoxam;

m) Diacylhydrazines, such as tebufenozide, chromafenozide or methoxyfenozide;

20 n) Diphenyl ethers, such as diofenolan or pyriproxifen;

o) Indoxacarb;

p) Chlorfenapyr; or

q) Pymetrozine.

In addition to the major chemical classes of pesticide listed above, other pesticides
25 having particular targets may be employed in the composition, if appropriate for the intended utility of the composition. For instance, selective insecticides for particular crops, for example stemborer specific insecticides (such as cartap) or hopper specific insecticides (such as buprofezin) for use in rice may be employed. Alternatively insecticides or acaricides specific for particular insect species/stages may also be included in the compositions (for
30 example acaricidal ovo-larvicides, such as clofentezine, flubenzimine, hexythiazox or tetradifon; acaricidal motilicides, such as dicofol or propargite; acaricides, such as

bromopropylate or chlorobenzilate; or growth regulators, such as hydramethylnon, cyromazine, methoprene, chlorfluazuron or diflubenzuron).

Examples of fungicidal compounds which may be included in the composition of the invention are (*E*)-*N*-methyl-2-[2-(2,5-dimethylphenoxy)methyl]phenyl]-2-methoxy-iminoacetamide (SSF-129), 4-bromo-2-cyano-*N,N*-dimethyl-6-trifluoromethylbenzimidazole-1-sulphonamide, α -[*N*-(3-chloro-2,6-xylyl)-2-methoxyacetamido]- γ -butyrolactone, 4-chloro-2-cyano-*N,N*-dimethyl-5-*p*-tolylimidazole-1-sulfonamide (IKF-916, cyamidazosulfamid), 3-5-dichloro-*N*-(3-chloro-1-ethyl-1-methyl-2-oxopropyl)-4-methylbenzamide (RH-7281, zoxamide), *N*-allyl-4,5,-dimethyl-2-trimethylsilylthiophene-3-carboxamide (MON65500), *N*-(1-cyano-1,2-dimethylpropyl)-2-(2,4-dichlorophenoxy)propionamide (AC382042), *N*-(2-methoxy-5-pyridyl)-cyclopropane carboxamide, acibenzolar (CGA245704), alanycarb, aldimorph, anilazine, azaconazole, azoxystrobin, benalaxyl, benomyl, biloxazol, bitertanol, blasticidin S, bromuconazole, bupirimate, captafol, captan, carbendazim, carbendazim chlorhydrate, carboxin, carpropamid, carvone, CGA41396, CGA41397, chinomethionate, chlorothalonil, chlorozolate, clozylacon, copper containing compounds such as copper oxychloride, copper oxyquinolate, copper sulphate, copper tallate and Bordeaux mixture, cymoxanil, cyproconazole, cyprodinil, debacarb, di-2-pyridyl disulphide 1,1'-dioxide, dichlofluanid, diclomezine, dicloran, diethofencarb, difenoconazole, difenzoquat, diflumetorim, *O,O*-di-*iso*-propyl-*S*-benzyl thiophosphate, dimefluazole, dimetconazole, dimethomorph, dimethirimol, diniconazole, dinocap, dithianon, dodecyl dimethyl ammonium chloride, dodemorph, dodine, doguadine, edifenphos, epoxiconazole, ethirimol, ethyl(*Z*)-*N*-benzyl-*N*[(methyl(methyl-thioethylideneaminooxycarbonyl)amino)thio]- β -alaninate, etridiazole, famoxadone, fenamidone (RPA407213), fenarimol, fenbuconazole, fenfuram, fenhexamid (KBR2738), fenciclonil, fenpropidin, fenpropimorph, fentin acetate, fentin hydroxide, ferbam, ferimzone, fluazinam, fludioxonil, flumetover, fluoroimide, fluquinconazole, flusilazole, flutolanil, flutriafol, folpet, fuberidazole, furalaxyl, furametpyr, guazatine, hexaconazole, hydroxyisoxazole, hymexazole, imazalil, imibenconazole, iminoctadine, iminoctadine triacetate, ipconazole, iprobenfos, iprodione, iprovalicarb (SZX0722), isopropanyl butyl carbamate, isoprothiolane, kasugamycin, kresoxim-methyl, LY186054, LY211795, LY248908, mancozeb, maneb, mefenoxam, mepanipyrim, mepronil, metalaxyl, metconazole, metiram, metiram-zinc, metominostrobin, myclobutanil, neoasozin, nickel dimethyldithiocarbamate, nitrothal-*isopropyl*, nuarimol, ofurace, organomercury

compounds, oxadixyl, oxasulfuron, oxolinic acid, oxpoconazole, oxycarboxin, pefurazoate, penconazole, pencycuron, phenazin oxide, phosetyl-Al, phosphorus acids, phthalide, picoxystrobin (ZA1963), polyoxin D, polyram, probenazole, prochloraz, procymidone, propamocarb, propiconazole, propineb, propionic acid, pyrazophos, pyrifenox, pyrimethanil, 5 pyroquilon, pyroxyfur, pyrrolnitrin, quaternary ammonium compounds, quinomethionate, quinoxifen, quintozone, sipconazole (F-155), sodium pentachlorophenate, spiroxamine, streptomycin, sulphur, tebuconazole, tecloftalam, tecnazene, tetraconazole, thiabendazole, thifluzamid, 2-(thiocyanomethylthio)benzothiazole, thiophanate-methyl, thiram, timibenconazole, tolclofos-methyl, tolylfluanid, triadimefon, triadimenol, triazbutil, 10 triazoxide, tricyclazole, tridemorph, trifloxystrobin (CGA279202), triforine, triflumizole, triticonazole, validamycin A, vapam, vinclozolin, zineb and ziram.

The compounds of formula (I) may be mixed with soil, peat or other rooting media for the protection of plants against seed-borne, soil-borne or foliar fungal diseases.

Examples of suitable synergists for use in the compositions include piperonyl 15 butoxide, sesamex, safroxan and dodecyl imidazole.

Suitable herbicides and plant-growth regulators for inclusion in the compositions will depend upon the intended target and the effect required.

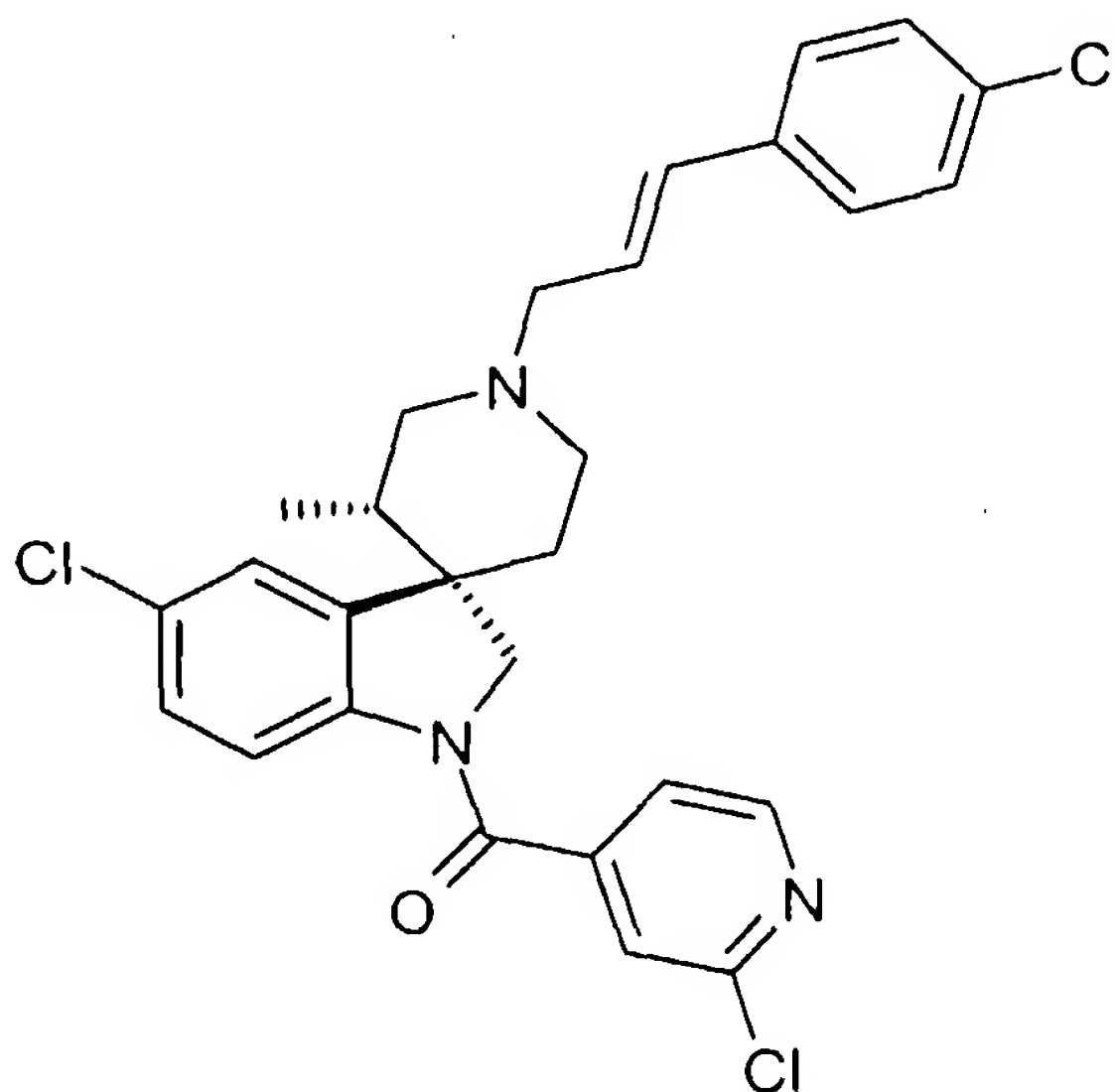
An example of a rice selective herbicide which may be included is propanil. An example of a plant growth regulator for use in cotton is PLX™.

20 Some mixtures may comprise active ingredients which have significantly different physical, chemical or biological properties such that they do not easily lend themselves to the same conventional formulation type. In these circumstances other formulation types may be prepared. For example, where one active ingredient is a water insoluble solid and the other a water insoluble liquid, it may nevertheless be possible to disperse each active ingredient in 25 the same continuous aqueous phase by dispersing the solid active ingredient as a suspension (using a preparation analogous to that of an SC) but dispersing the liquid active ingredient as an emulsion (using a preparation analogous to that of an EW). The resultant composition is a suspoemulsion (SE) formulation.

The invention is illustrated by the following Examples:

EXAMPLE 1

This Example illustrates the preparation of compound III.49; 5-chloro-1-(2-chloropyridin-4-yl)carbonyl-1'-[*trans*-3-(4-chlorophenyl)allyl]-3'-methyl-spiro[indoline-3,4'-piperidine]



Step A: Potassium t-butoxide (1.56 g) was added portionwise to a stirred suspension of methoxymethyltriphenylphosphonium chloride (4.76 g) in tetrahydrofuran (30 ml) at 0°C under argon. The resulting orange mixture was stirred at 0°C for 30 min., then 1-(4-chlorocinnamyl)-3-methyl-piperidin-4-one (1.83 g, prepared by alkylation of 3-methyl-piperidin-4-one [CAS No 5773-58-0] with 4-chloro-cinnamyl chloride) dissolved in a minimum volume of tetrahydrofuran was added dropwise and the resulting solution was stirred at room temperature for 1 hour, poured into water and extracted twice with ether. The combined organic layers were dried over sodium sulphate and concentrated *in vacuo*. The residue was purified by silica gel chromatography (cyclohexane:ethyl acetate 75:25) to afford 1-(4-chlorocinnamyl)-4-[1-methoxy-methylidene]-3-methyl-piperidine as a mixture of diastereoisomers. MS (ES+) 292/294 (M+H⁺).

Step B: A mixture of 1-(4-chlorocinnamyl)-4-[1-methoxy-methylidene]-3-methyl-piperidine (1.25 g) and 4-chlorophenylhydrazine hydrochloride (0.85 g) in chloroform (43 ml) was treated with trifluoroacetic acid (4.3 ml) and heated at reflux under argon for 12 hours. The reaction mixture was cooled to room temperature, triethylsilane (3.1 ml) was

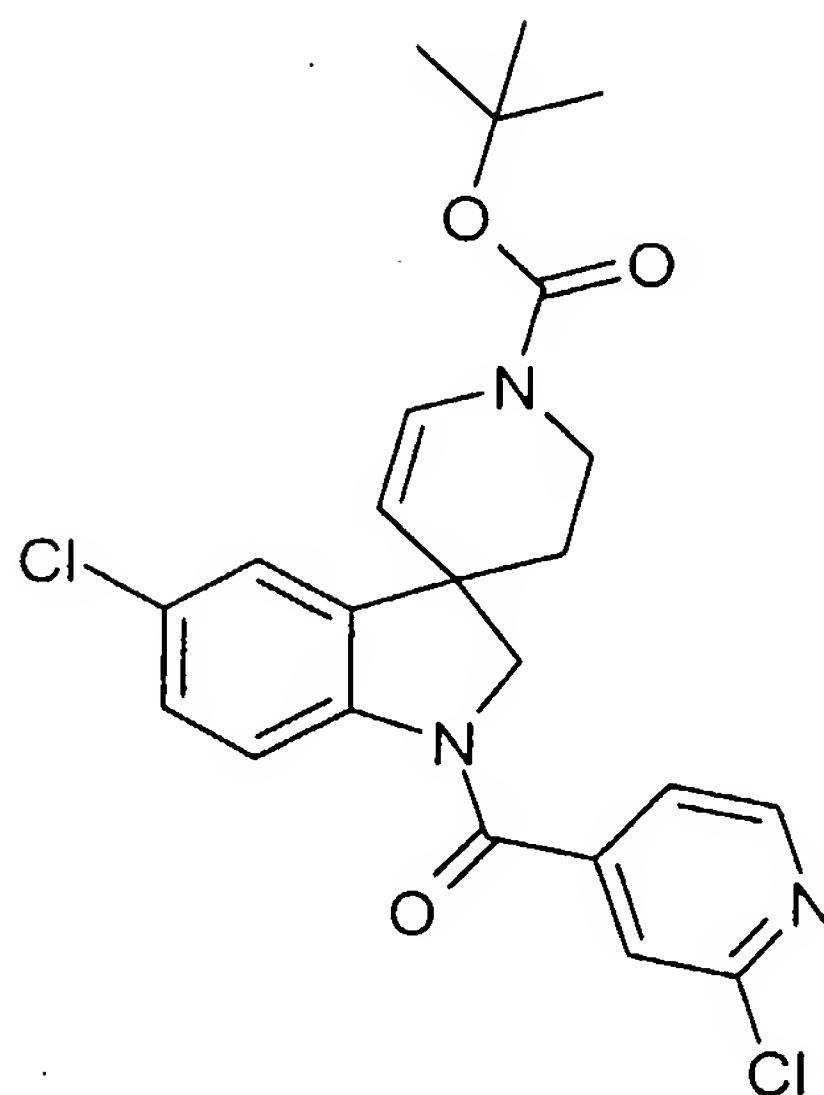
added and the solution refluxed for 2 hours. The reaction mixture was cooled to room temperature, diluted with dichloromethane, neutralised with aqueous ammonium hydroxide, washed with brine, dried (sodium sulphate) and concentrated. The dark residue was purified by silica gel chromatography (cyclohexane:ethyl acetate 1:1 + 0.5% triethylamine) to afford
5 5-chloro-1'-[*trans*-3-(4-chlorophenyl)allyl]-3'-methyl-spiro[indoline-3,4'-piperidine] (1.63 g). ¹H NMR (600 MHz, CDCl₃) 0.69 (d, J = 9 Hz, 3H), 1.89 (m, 2H), 2.0 (m, 3H), 2.86 (dd, 1H), 2.95 (m, 1H), 3.17 (d, J = 7.2 Hz, 2H), 3.31 (d, J = 12 Hz, 1H), 3.58 (d, J = 12 Hz, 1H), 3.65 (m, 1H), 6.30 (dt, J = 7.2, 18.0 Hz, 1H), 6.49 (d, J = 8.0 Hz, 1H), 6.50 (d, J = 7.0 Hz, 1H), 2H), 6.94 (d, J = 0.9 Hz, 1H), 6.97 (dd, J = 7.0; 0.9 Hz, 1H), 7.25-7.33 (m, 4H); MS
10 (ES+) 387/389 (M+H⁺).

Step C: To a solution of 5-chloro-1'-[*trans*-3-(4-chlorophenyl)allyl]-3'-methyl-spiro[indoline-3,4'-piperidine] obtained in Step B (210 mg) and triethylamine (0.23 ml) in dichloromethane (10 ml) at 0°C was added 2-chloro-isonicotinoyl chloride (176 mg) and the resulting solution was kept at 0°C for 30 min., diluted with dichloromethane, washed with
15 diluted aqueous sodium bicarbonate, dried (sodium sulphate) and concentrated. Silica gel chromatography of the residue (cyclohexane:ethyl acetate 1:1) afforded the title compound as a slight yellow solid (200 mg); M.p. 91-93°C; MS (ES+) 526/528 (M+H⁺)

EXAMPLE 2

20 This Example illustrates the preparation of 5-chloro-1-(2-chloropyridin-4-yl)carbonyl-spiro[indoline-3,4'-(1',2',3',4'-tetrahydropyridine)]-1' carboxylic acid tert-butyl ester

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Step A: Triphenylphosphine (5.16 g) was dissolved in tetrahydrofuran (130 ml) and the solution was cooled to 0°C under argon. Diisopropylazodicarboxylate (3.82 ml) was added dropwise over 10 min and the resulting mixture was stirred at 0°C for 20 min (formation of a white precipitate). N-(4-Chloro-2-iodo-phenyl)-2,2,2-trifluoro-acetamide (5.5 g) was added as a solid, followed by 4-hydroxymethyl-3,6-dihydro-2H-pyridine-1-carboxylic acid tert-butyl ester (*J. Org. Chem.* **2001**, *66*, 5545-5551, 3.4 g) dissolved in a minimum volume of tetrahydrofuran. The reaction mixture was allowed to warm to room temperature and stirred for 12 hours. The solution was then concentrated *in vacuo* and the residue subjected to silica gel chromatography (cyclohexane:ethyl acetate 9:1) to afford 4-[[[(4-chloro-2-iodo-phenyl)-(2,2,2-trifluoro-acetyl)-amino]-methyl]-3,6-dihydro-2H-pyridine-1-carboxylic acid tert-butyl ester (4.7 g). ¹H NMR (600 MHz, CDCl₃) 1.5 (s, 9H), 2.20 (m, 2H), 3.49 (m, 1H), 3.50 (d, J = 17 Hz, 1H), 3.55 (m, 1H), 3.8-3.9 (m, 2H), 5.02 (d, J = 17 Hz, 1H), 5.40 (s, 1H), 7.0 (m, 1H), 7.38 (dd, 1H), 7.92 (d, 1H); MS (ES⁺) 445/447 (M+H⁺-CO₂-isobutene), 486/488 (M+H⁺-isobutene).

Step B: In a dried, argon purged flask, 4-[[[(4-chloro-2-iodo-phenyl)-(2,2,2-trifluoro-acetyl)-amino]-methyl]-3,6-dihydro-2H-pyridine-1-carboxylic acid tert-butyl ester obtained in Step A (3.55 g) was dissolved in dimethylformamide (55 ml); triethylamine (2.3 ml), tetrabutylammonium bromide (2.5 g) and palladium(II) acetate (0.22 g) were successively added and the solution was heated at 80°C for 3 hours. After cooling to room temperature, the reaction mixture was diluted with ethyl acetate, washed with brine, dried over sodium sulphate and concentrated *in vacuo*. The crude residue was dissolved in methanol (140 ml)

and water (30 ml), placed under argon and potassium carbonate (6.8 g) was added. The reaction mixture was stirred for 1 hour at room temperature, the mixture was filtered and the filtrate concentrated *in vacuo*. The residue was diluted with ethyl acetate, washed with brine, dried (sodium sulphate) and concentrated in *vacuo*. Silica gel chromatography of the residue

5 (cyclohexane:ethyl acetate 8:2) afforded 5-chloro-spiro[indoline-3,4'-(1',2',3',4'-tetrahydropyridine)]-1' carboxylic acid tert-butyl ester (1.3 g) as a pale yellow powder.

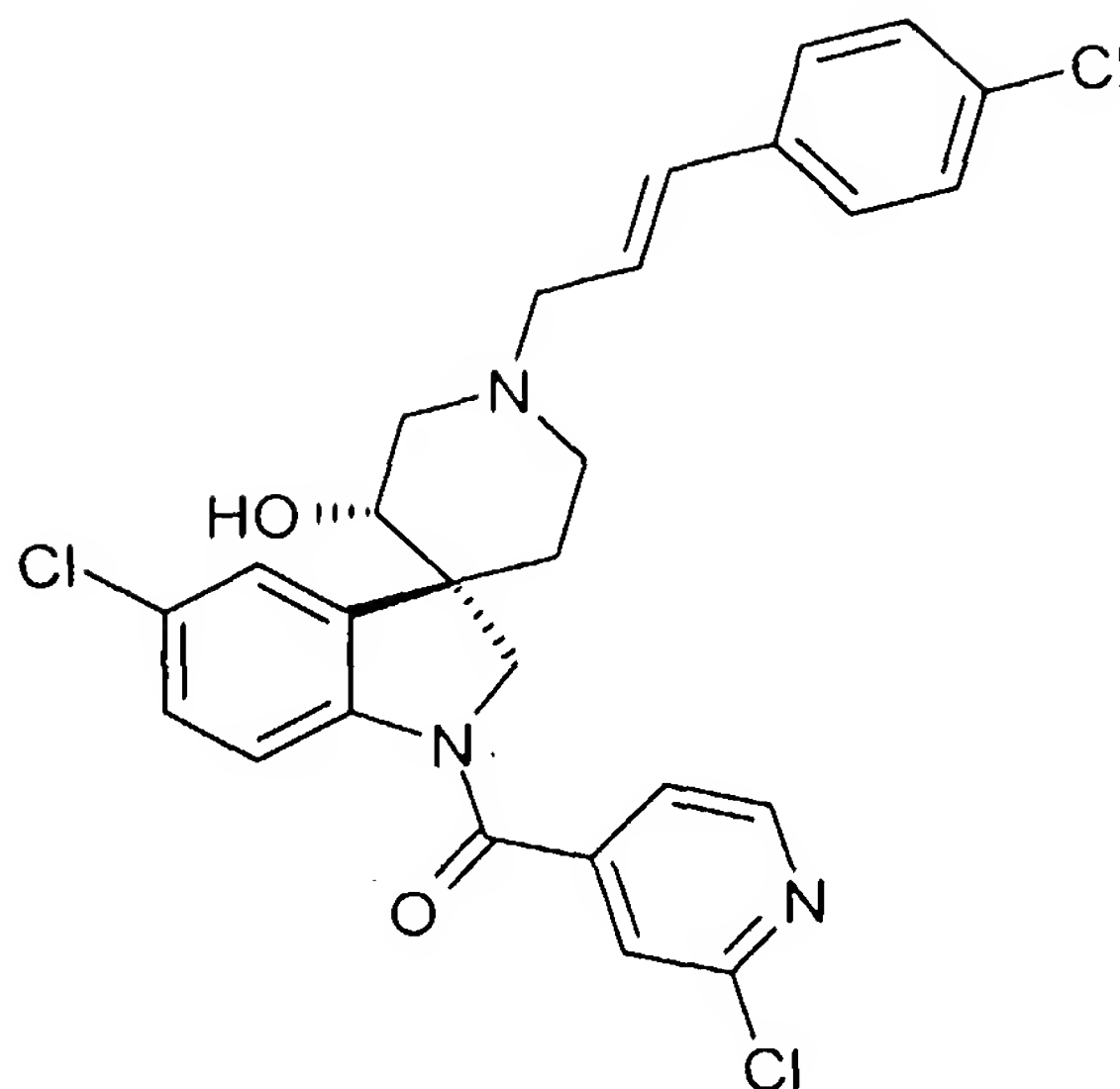
M.p. 50-51°C; ¹H NMR (600 MHz, CDCl₂CDCl₂, 80°C) 1.54 (s, 9H), 1.83 (m, 1H), 1.99 (m, 1H), 3.36 (d, J = 11.4 Hz, 1H), 3.50 (d, J = 11.4 Hz, 1H), 3.51 (m, 1H), 3.75 (brs, 1H, NH), 3.78 (m, 1H), 4.81 (d, J = 8.6 Hz, 1H), 6.57 (d, J = 10.2 Hz, 1H), 6.98 (d, J = 2.4 Hz, 1H),
10 7.02 (m, 1H), 7.03 (dd, J = 10.2, 2.4 Hz, 1H); ¹³C NMR (125 MHz, CDCl₂CDCl₂, 80°C) selected data 28.2, 33.2, 39.1, 60.6, 108.5, 110.2, 123.5, 126.4, 127.5; MS (ES+) 221/223 (M+H⁺-CO₂-isobutene), 265/267 (M+H⁺-isobutene); 321/323 (M+H⁺).

Step C: 5-Chloro-spiro[indoline-3,4'-(1',2',3',4'-tetrahydropyridine)]-1' carboxylic acid tert-butyl ester (274 mg) was acylated in dichloromethane (10 ml) with 2-chloroisonicotinoyl chloride (250 mg) in the presence of triethylamine (0.48 ml) using the
15 method described in Example 1 Step C to give the title compound (360 mg). MS (ES+) 360/362 (M+H⁺-CO₂-isobutene), 404/406 (M+H⁺-isobutene).

EXAMPLE 3

20 This Example illustrates the preparation of compound CIII.49, 5-chloro-1-(2-chloropyridin-4-yl)carbonyl-1'-[*trans*-3-(4-chlorophenyl)allyl]-3'-hydroxy-spiro[indoline-3,4'-piperidine]

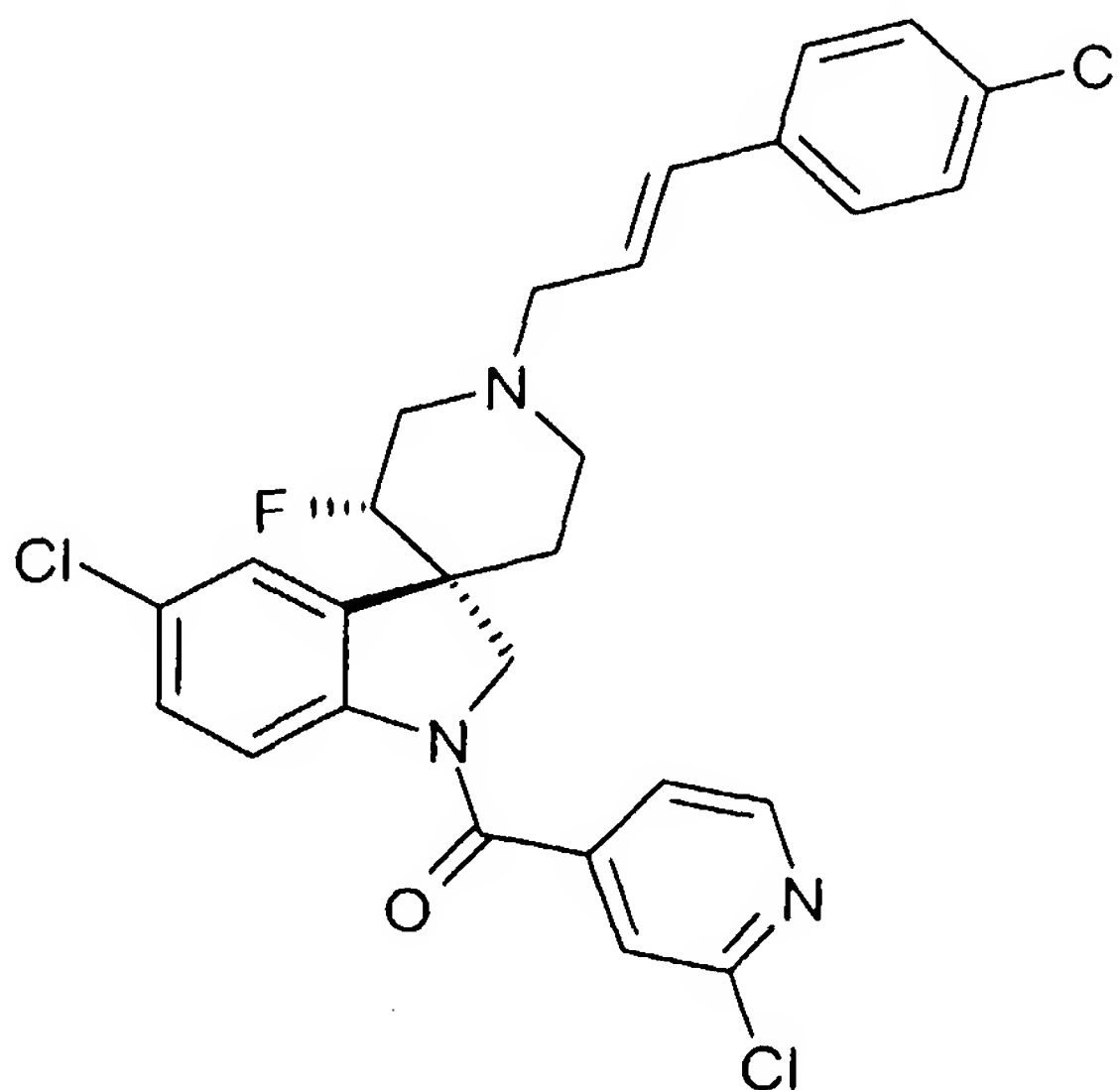
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Borane-methylsulfide complex (1M in dichloromethane, 1.05 ml) was added dropwise under argon to a solution of 5-chloro-1-(2-chloropyridin-4-yl)carbonyl-spiro[indoline-3,4'-(1',2',3',4'-tetrahydropyridine)]-1' carboxylic acid tert-butyl ester
5 (Example 2, 350 mg) in tetrahydrofuran (15 ml) at room temperature and the resulting solution was stirred at room temperature for 18 hours. 3N NaOH (0.9 ml) was added, followed by 30% aqueous hydrogen peroxide (0.9 ml) and the resulting mixture was stirred at room temperature for 1 hour, poured into water, extracted twice with ethyl acetate, dried (sodium sulphate) and concentrated *in vacuo*. The major product was isolated by silica gel
10 chromatography (cyclohexane:ethyl acetate 7:3) to give 125 mg of a solid. The latter was dissolved in dichloromethane (10 ml) and treated with trifluoroacetic acid (1 ml) at room temperature for 2 hours. The solution was partitioned between water and dichloromethane, the organic layer was neutralised with saturated aqueous sodium bicarbonate, dried (sodium sulphate) and concentrated *in vacuo*. The residue was dissolved in acetonitrile (5 ml) and
15 treated with diisopropylethylamine (0.065 ml) and 4-chlorocinnamyl bromide (58 mg) for 12 hours at room temperature under argon. Standard aqueous work-up afforded a residue which was purified by flash chromatography (silica gel, ethyl acetate:methanol 98:2) to give the title product (51 mg) as a colorless solid. M.p. 110°C; MS (ES+) 528/530/532/533 (M+H⁺).

EXAMPLE 4

This Example illustrates the preparation of compound CCIII.49, 5-chloro-1-(2-chloropyridin-4-yl)carbonyl-1'-[*trans*-3-(4-chlorophenyl)allyl]-3'-fluoro-spiro[indoline-3,4'-piperidine]

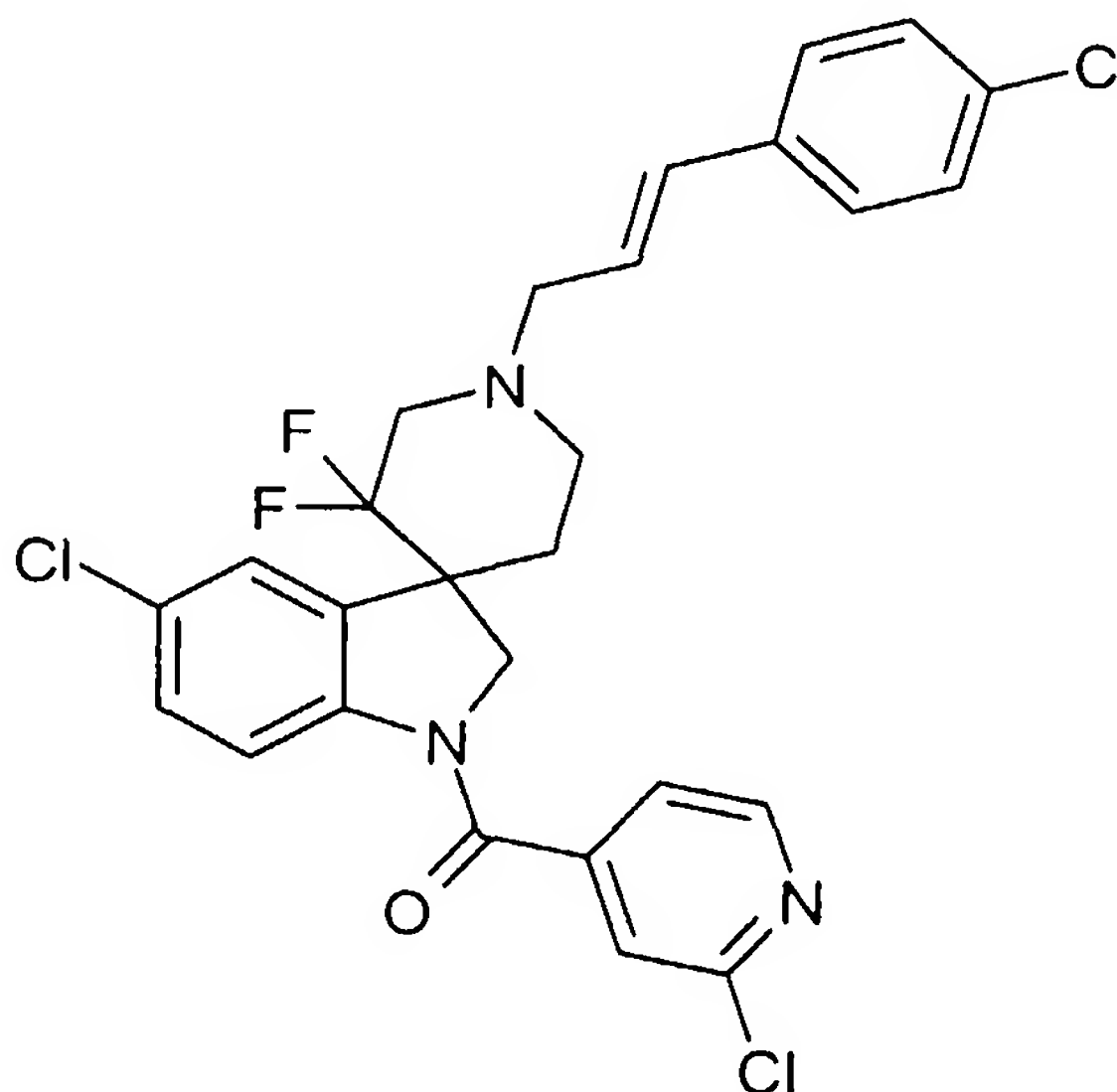


[1-(Chloromethyl)-4-fluoro-1,4-diazoniabicyclo[2.2.2]octane bis(tetrafluoroborate)] (SelectfluorTM, 266 mg) was added to a solution of 5-chloro-1-(2-chloropyridin-4-yl)carbonyl-spiro[indoline-3,4'-(1',2',3',4'-tetrahydropyridine)]-1' carboxylic acid tert-butyl ester (Example 2, 345 mg) in dimethylformamide (20 ml) at room temperature and the resulting solution was stirred at 70°C for 1 hour, cooled to room temperature, poured into water (50 ml) and extracted twice with ethyl acetate; the combined organic layers were washed with brine, dried (sodium sulphate), concentrated *in vacuo* and the residue purified by silica gel chromatography (cyclohexane:ethyl acetate 8.2) to afford 5-chloro-1-(2-chloropyridin-4-yl)carbonyl-3'-fluoro-2'-hydroxy-spiro[indoline-3,4'-piperidine] 1' carboxylic acid tert-butyl ester (200 mg) as a colorless solid; MS (ES+) 496/498 (M+H⁺). This product was dissolved in dichloromethane (10 ml) and treated successively with triethylsilane (0.3 ml) and trifluoroacetic acid (0.57 ml); the solution was stirred under argon for 12 hrs, diluted with dichloromethane, neutralised with aqueous sodium bicarbonate, dried (sodium sulphate) and concentrated *in vacuo*. The residue was dissolved in acetonitrile (10 ml) and treated with diisopropylethylamine (0.1 ml) and 4-chlorocinnamyl chloride (71 mg) for 12 hours at reflux under argon. Standard aqueous work-up afforded a residue which was

purified by flash chromatography (silica gel, cyclohexane:ethyl acetate 7:3) to give the title product (111 mg) as a colorless solid. M.p. 96-97°C; MS (ES+) 530/532/534 (M+H⁺).

EXAMPLE 5

5 This Example illustrates the preparation of compound CCCIII.49, 5-chloro-1-(2-chloropyridin-4-yl)carbonyl-1'-[*trans*-3-(4-chlorophenyl)allyl]-3',3'-difluoro-spiro[indoline-3,4'-piperidine]



10 [1-(Chloromethyl)-4-fluoro-1,4-diazoniabicyclo[2.2.2]octane bis(tetrafluoroborate)] (SelectfluorTM, 1.05 g) was added to a solution of 5-chloro-1-(2-chloropyridin-4-yl)carbonyl-spiro[indoline-3,4'-(1',2',3',4'-tetrahydropyridine)]-1' carboxylic acid tert-butyl ester (Example 2, 345 mg) in dimethylformamide (15 ml) at room temperature and the resulting solution was stirred at 80°C for 2 hours, cooled to room temperature, poured into water and
15 extracted twice with ethyl acetate; the combined organic layers were washed with brine, dried (sodium sulphate), concentrated *in vacuo* and the residue purified by silica gel chromatography (cyclohexane:ethyl acetate 65:35) to afford 5-chloro-1-(2-chloropyridin-4-yl)carbonyl-3',3'-difluoro-2'-hydroxy-spiro[indoline-3,4'-piperidine] 1' carboxylic acid tert-butyl ester (217 mg) as a colorless solid; MS (ES+) 514/516 (M+H⁺). This product was
20 dissolved in dichloromethane (14 ml) and treated successively with triethylsilane (0.34 ml) and trifluoroacetic acid (0.64 ml); the solution was stirred under argon for 12 hrs, diluted with dichloromethane, neutralised with aqueous sodium bicarbonate, dried (sodium sulphate)

and concentrated *in vacuo*. The residue was dissolved in acetonitrile (10 ml) and treated with diisopropylethylamine (0.1 ml) and 4-chlorocinnamyl chloride (71 mg) for 10 hours at reflux under argon. Standard aqueous work-up afforded a residue which was purified by flash chromatography (silica gel, cyclohexane:ethyl acetate 7:3) to give the title product I.4 (118 mg) as a colorless solid. M.p. 100-101°C; ¹H NMR (600 MHz, CDCl₂CDCl₂, 80°C) 1.86 (m, 1H), 2.20 (m, 1H), 2.41 (m, 1H), 2.45 (m, 1H), 3.02 (d, J = 12 Hz, 1H), 3.24 (m, 3H), 3.85 (d, J = 12 Hz, 1H), 4.24 (m, 1H), 6.24 (dd, J = 12 Hz, 7.2 Hz, 1H), 6.6 (d, J = 12 Hz, 1H), 7.27-7.47 (m, 9H), 8.57 (d, J = 6 Hz, 1H); ¹³C NMR (125 MHz, CDCl₂CDCl₂, 80°C) selected data 34.5, 48.4, 55.5, 56.8, 59.3, 119.4, 120.3, 121.5, 125.9, 126.1, 127.5, 128.6, 128.9, 129.9, 132.2, 150.6; MS (ES+) 548 (M+H⁺).

EXAMPLE 6

This Example illustrates the pesticidal/insecticidal properties of compounds of formula (I).

Test against were performed as follows:

15 *Spodoptera littoralis* (Egyptian cotton leafworm)

Cotton leaf discs were placed on agar in a 24-well microtiter plate and sprayed with test solutions at an application rate of 200 ppm. After drying, the leaf discs were infested with 5 L₁ larvae. The samples were checked for mortality, repellent effect, feeding behaviour, and growth regulation 3 days after treatment (DAT). The following compounds gave at least 80% control of *Spodoptera littoralis*:
20 CIII-49.

Heliothis virescens (Tobacco budworm):

25 Eggs (0-24 h old) were placed in 24-well microtiter plate on artificial diet and treated with test solutions at an application rate of 200 ppm by pipetting. After an incubation period of 4 days, samples were checked for egg mortality, larval mortality, and growth regulation. The following compounds gave at least 80% control of *Heliothis virescens*:
III-49, CIII-49, CCIII-49, CCCIII-49.

30

Plutella xylostella (Diamond back moth):

24-well microtiter plate (MTP) with artificial diet was treated with test solutions at an application rate of 18.2 ppm by pipetting. After drying, the MTP's were infested with larvae (L2)(10-15 per well). After an incubation period of 5 days, samples were checked for larval mortality, antifeedant and growth regulation. The following compounds gave at least 80%

5 control of *Plutella xylostella*:

CIII-49, CCIII-49, CCCIII-49.

Aedes aegypti (Yellow fever mosquito):

10 10-15 *Aedes* larvae (L2) together with a nutrition mixture are placed in 96-well microtiter plates. Test solutions at an application rate of 2ppm are pipetted into the wells. 2 days later, insects were checked for mortality and growth inhibition. The following compounds gave at least 80% control of *Aedes aegypti*

III-49, CIII-49, CCIII-49.